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THE BUILDER

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AN ANALYSIS OF THE INDUSTRY?

THE leading article in our issue for July 24, on the subject of "on-costs" in the building industry, has aroused considerable interest, and the views expressed appear to have met with general approval. Two letters—one signed "Balbus" and the other "Northern Builder" printed in last week's issue—may be considered typical. The first deals with the matter as it affects the dealings of surveyors with the War Damage Commission. The second takes a wider and broader standpoint. As regards the first letter, the more we learn of the methods—or rather, as some feel, the lack of method—of the Commission, the more we become convinced that its procedure shows an ineptitude and disregard of the public interest which amounts to a positive scandal. It is notorious that on claims for more than £500 no payments were made in the vast majority of cases until 1942, although the bulk of the damage occurred in 1940 or the early part of 1941. Even now, the payment does not appear to exceed 60 per cent. of the claim.

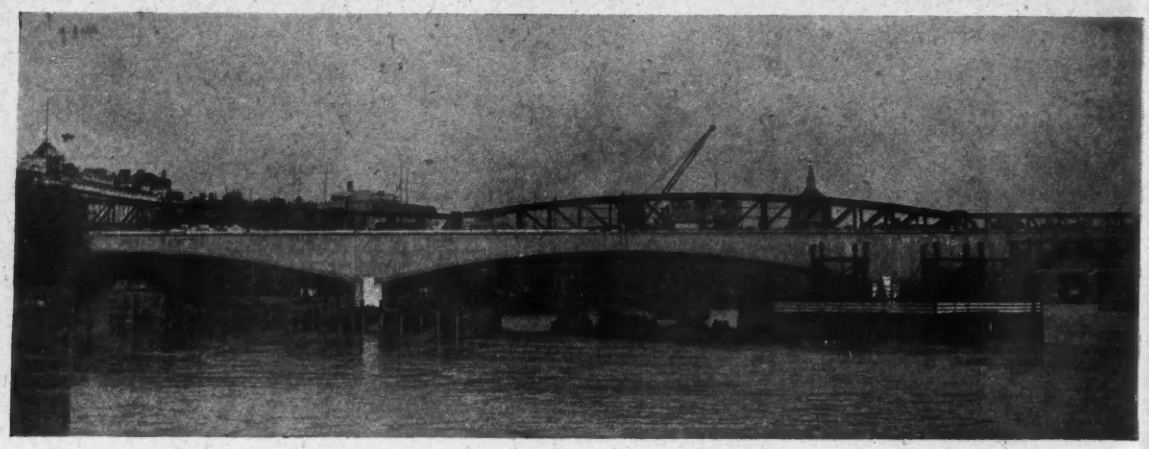
The reason for this extraordinary delay, when we get to know more of the composition of the Commission, is clear. "Balbus" is perfectly correct in stating that no member of it is connected with the building industry. The Commission's personnel, in fact, appears to have no technical qualification whatever, and it is difficult to avoid the inference that they have not functioned merely because, having no knowledge, they are afraid to do so. They are reticent with regard to percentages because they do not know what is a correct one to recognise. In actual practice they have adopted the terms of the Ministry of Home Security's contract (except that they will only allow 5 per cent. on sub-contracts), but officially this must not be stated, doubtless because it cannot be enforced, since the Act from which they derive their authority does not state that this contract is to be the basis of "Proper Cost." It has merely been selected presumably because it is the only prime cost contract in existence which has been agreed both by a Government Department and the Master Builders, although it is amply clear that only the large builders have any chance of working this form of contract with profit. In this particular instance a lack of knowledge of "on costs" on the part of those who negotiated this contract has been disastrous.

Considering the amount of work which has been done under these conditions the matter in this particular issue alone would have been serious enough but, as "Northern Builder" states in his letter, the evil consequences of such lack of knowledge are far more widespread. He states that contracts such as that of the Ministry of Home Security put a premium on dishonesty. It would be more correct to say that the state of muddle and ignorance which has permeated the building industry for the last twenty years has not merely put a premium on dishonesty but has made it a necessity to get a profit. Competitive contracting, as apart from jobbing or speculative building, has been simply a gamble, in which the players have not known the value of their cards, and as a result have put in their bids so low that they were bound to lose unless luck, or some other factor, supervened. Anyone who has inspected new building with an experienced eye knows how often that "other factor" has supervened. Such habits once acquired are not easily got rid of. *Facilis est descensus Averno*!

Again we ask, as we have done before, "What is the remedy?" Is our ancient and honourable craft to fall more and more into disorder and even disrepute? Is it to fall increasingly into the hands of the trickster and the dishonest gambler? Is the name "builder" to become a byword? We are getting perilously near it. That salvation can come from within appears to be doubtful. When "Northern Builder" speaks of the absence of a united and intelligent national leadership, it is not for us to state whether we agree or not, but that he expresses a widespread opinion there is no doubt. The very existence of the Federation of Greater London Master Builders' organisation is a proof of the existence of discontent with the older body in the Metropolitan area. Failing agreement between the various parties, help must come from without, and the obvious body to take the matter up is the Ministry of Works and Planning, drawing on the experience of the industry. It may be said that this body has sufficient on its hands already, but since it is to-day the principal employer of the building industry and will be indirectly, if not directly, intimately connected with it after the war, it has an obvious interest and even a possible debt to repay to the industry for the neglect shown by some other Departments during the pre-war years.

Unless building work in the future is to be carried out by direct labour, the competence and status of those who will be the instruments of Post-War Reconstruction are obviously most important. For this practical reason the Ministry should be interested.

Would it not be possible for the Minister to set up a small economic section, preferably under a quantity surveyor—similar to that which, under Sir James West, is studying post-war problems from the design point of view—to analyse the structure of the industry and study the different elements which go to make up building costs? The whole structure of the industry—not merely the subject of "on costs"—would need to be so analysed and thus it might be put on a sound and scientific basis. The benefit to the future would be immense.



THE NEW WATERLOO BRIDGE SEEN FROM THE RIVER. (See Note on this page.)

NOTES AND NEWS

R.I.B.A. Reconstruction Committee.

THE first general statement of its conclusions has been issued by the R.I.B.A. Reconstruction Committee, and is given in full in this issue (pp. 179-183). The main committee subdivided itself into six groups to work on special aspects of the Committee's task as follows: Planning and amenities; housing; building legislation; architecture and the building industry; professional status and qualifications; and building technique. The statement has been laid before the Minister of Works and Planning.

Ordnance Map Pool.

WITH the help of members of the R.I.B.A., it is proposed on the suggestion of a member to form an ordnance map "pool" or series of pools in appropriate centres throughout the country. It is clear that all members will benefit if the R.I.B.A. is able to form such a collection. It is proposed to form the London and Home Counties Pool immediately, and members who have 25 in. or 6 in. maps of that area, whether or not they live or work in it, are asked to send these maps to the Institute, addressed to the Librarian. Members who have maps of other parts of Britain are asked in the first place to send *lists* of them only to the Librarian, giving the scale, the sheet number, the date of the edition, and the name of the city, town or village. When it is seen what maps of areas other than London and the Home Counties are available, it will be possible to plan for the establishment of other well-placed depositories in, preferably, allied society libraries or, if no suitable allied society library exists, in some other easily accessible place. All maps deposited will become the property of the R.I.B.A., but it is proposed to arrange the transfer from private ownership to the R.I.B.A. so that each donor will retain special use rights over the maps originally deposited by him and will be entitled to borrow these for limited periods for use in his own office. The maps at the R.I.B.A. will be kept in a position of comparative safety from war damage. The Librarian will gladly answer any questions, and the R.I.B.A. will welcome suggestions as to the organisation and development of the scheme.

Waterloo Bridge.

ON the occasion of the opening of the new Waterloo Bridge, Mr. Christian Barman achieved the remarkable feat of compressing the history of the affair and an appreciation of the new bridge into a four minutes broadcast. Few will disagree with his final comment that however much we may regret the passing of the old bridge "there is one thing we can be very pleased about. The old bridge was a first-rate bridge, and the new one is a first-rate bridge, too. It is without question the best bridge built in London since the old Waterloo Bridge was built. For once we have shown that we can do as well as the great ones of the past—when we try."

Now that some of the wooden piles have been removed, some idea is obtainable of what the new Waterloo Bridge will look like from the river, In connection with illustrations of the bridge which have appeared, a correspondent writes: Although the spans of the new Waterloo Bridge are frequently referred to as arches, it may be pointed out that this is not correct. The new bridge is a continuous beam of varying depth with a freely suspended portion in the middle span. At the north end of the bridge, for example, the beam cantilevers northwards over the abutment, and is continued southwards over the first two piers, cantilevering beyond the second to pick up the near end of a freely supported beam which, with the two cantilevers, forms the middle span.

Bomb Damage in Cambridge.

SOME damage was done to buildings in Cambridge during a recent raid. The Union Library received a direct hit by a high explosive and several incendiaries, and a number of the 50,000 volumes housed were lost, though steel stacks saved the majority from blast effects. Whewell's Court of Trinity College lost windows, but the Round Church, close to the Union, escaped with the loss of a stained-glass window pane.

Economy Constructional Standards.

WE have received an inquiry from a multiple firm who carry out a great deal of building work as to whether their draughtsmen—in preparing building schemes for submission to Regional Commissioners—should work to the new economy standards (published in our issue for August 21). We are informed by the Ministry of Works and Planning that they should do so.

Glasgow City Engineer.

GLASGOW Corporation has confirmed the appointment of Mr. Robert Bruce as City Engineer and Master of Works in succession to Mr. Thomas Somers, who retires at the end of the year.

Allocation of Government Contracts.

A SPECIAL general meeting of the members of the Federation of Greater London Master Builders will be held on Monday, August 31, at 2.45 p.m., at the Connaught Rooms, Great Queen-street, W.C.2, for the purpose of considering and, if thought necessary, passing the following resolution:—

"That His Majesty's Government instruct its appropriate Departments to revise immediately its present system of allocation of contracts and labour with a view to using to the full the complete organisation of the medium and smaller builders."

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AGE GROUPS IN HOUSING

A METHOD OF SURVEYING EXISTING ACCOMMODATION

BY C. W. CRASKE, M.M., A.R.I.B.A.

In a recent technical publication* it was stated, among other things, that "research appears to be urgently needed upon the age and probable life of present-day housing."

In spite of the risk, in war time, that the existing situation may change through circumstances beyond our control, this is a task which should be put in hand while there is yet plenty of time for its accomplishment. There are many qualified persons—architects, builders and others with special knowledge of their own localities—who are not fully employed upon more urgent work, and who could devote some part of their time for the collection of the needed data. The material collected could be received by some central authority or professional body, such as the R.I.B.A. or the Town Planning Institute, and held ready for the use of those who will, in due course, shape the nation's post-war housing policy.

1. The Mapping of Age Groups.

The various ages of the buildings in a town or other convenient unit of population can readily be shown on a map by means of a colour scale. This writer is finding it of great interest to build up this information on a set of Ordnance maps of his own borough, covering a building period extending from about 1760 to the present day, using the scale of colours set out below :—

Deep red : The Georgian period.
Lighter red : The early part of the 19th Century.
Orange : Early Victorian, to about 1850.
Yellow : Mid-Victorian, to about 1880.
Green : Late Victorian, to 1900.
Blues, in deepening shades, from that year onwards.

A complete picture of the situation in terms of age is beginning to take shape; readable at a glance, suggesting a number of immediate inferences, and providing a jumping-off ground for further research.

So far as the writer is aware, this approach to the problem has not yet been given much consideration. The more favoured approach employed by students of the subject is sociological in character and is directed to the betterment of living conditions in the central, overcrowded areas of our towns. Urgent as it certainly was, in pre-war years, to concentrate upon what appeared to be the poorest class of housing, a much wider outlook is now called for. It will be found, to the surprise of many, that inadequate and unhealthy living conditions are by no means confined to what are loosely and vaguely termed the "slums." Houses of the most respectable exteriors, in well-laid-out neighbourhoods, will only too often be found to show one or more such serious defects as dry rot, persistent dampness, antiquated plumbing, or means of sanitation utterly inadequate for the three or more separate tenancies which they contain. This great mass of property in the "inner ring" of the town's suburbs will shortly provide a problem no less urgent than that of the more obvious slums. The key to the proper appreciation of the situation as a whole will be found in the age-group map to be described. The same method can be applied with equally interesting and valuable results to schools, licensed premises and provision shops—to mention only a few lines of research for persons interested in buildings other than dwellings.

2. External Features in Housing.

There are several ways by which the age of a house may be determined, either quite accurately or with a few years' margin of error. The deposited drainage plans of the local authority give exact information extending over possibly 80 or more years; but they are normally only accessible to local authority officers, and the time and trouble necessary to consult these and similar documents is not usually worth while. Almost every architect, estate agent or solicitor in practice has, however, a wealth of material to draw upon in the shape of old estate maps, which can much more readily be consulted. Should these sources fail, anyone who has made a study of the slight yet unmistakable changes which have taken place, every ten years or so, in the outward appearance of our houses, will rarely be at a loss. Every town can show a number of small, medium, and more ambitious dwellings, to which the local builder, with proper pride, has appended his initials and the year of erection. A careful study of such examples will show the architectural characteristics of their day, in simple constructional or ornamental features; and the information thus gained can be used again and again, until the habit of placing any building within its own decade becomes automatic.

The dated examples shown in Fig. 1 may be of interest, as they illustrate the changing architectural fashion-plate in dwellings of a very modest kind. Thus we have, in London, the characteristic and well-designed doorway to be found in many a two-storeyed, terraced cottage of the 'forties. Twenty years later, there are one or two favourite bits of classical detail which unmistakably date every house on which they appear. The rising tide of national prosperity seems to be reflected in the florid Italo-Renaissance ornament of the 'seventies, upon which Ruskin turned his indignation, declaring the style unworthy of a Christian community. The Gothic revival which he urged was not long in coming. From 1880 onwards, the smallest house displays some Gothic feature. During the Jubilee decade were built those depressing, monotonous terraces of two-storeyed houses, with their "tunnel back" additions at the rear, which outnumber all other types in the "inner rings" of our great towns.

*"When We Build Again." Published by the Bournville Trust.

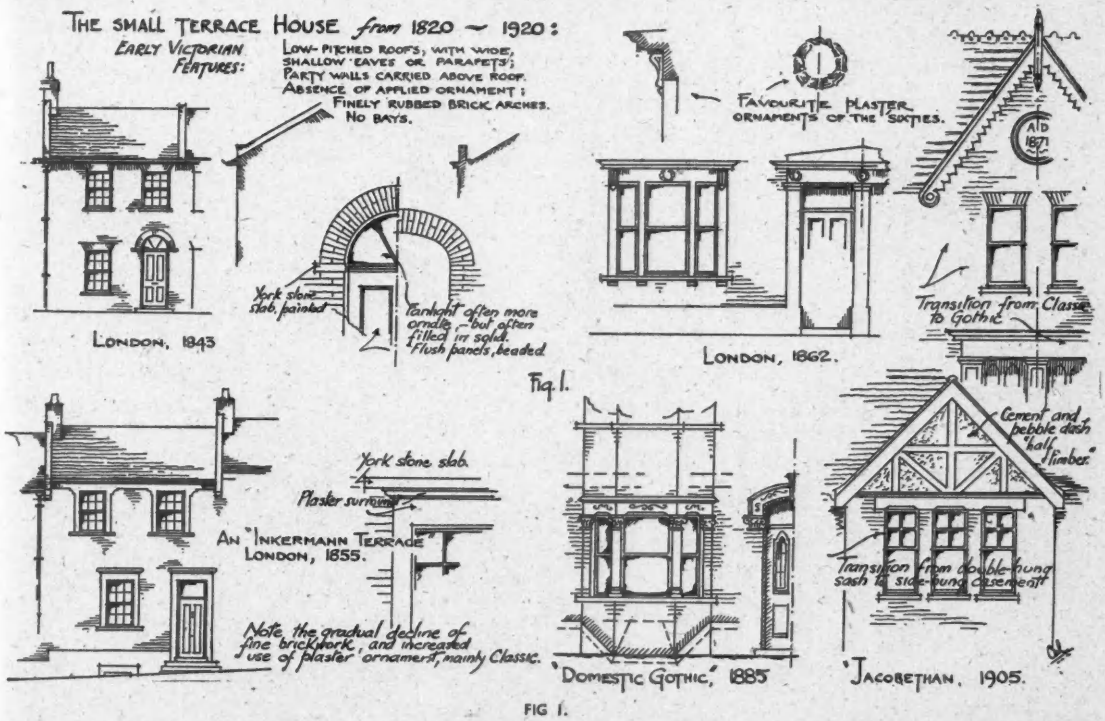

THE SMALL TERRACE HOUSE from 1820 ~ 1920:
EARLY VICTORIAN FEATURES:
LOW-PITCHED ROOFS, WITH WIDE, SHALLOW EAVES OR PARAPETS;
PARTY WALLS CARRIED ABOVE ROOF.
ABSENCE OF APPLIED ORNAMENT;
FINELY RUBBED BRICK ARCHES.
NO BAYS.
York stone slab, painted
Fanlight often more ornate, but often filled in solid. Flush panels, beaded.
LONDON, 1843
FAVOURITE PLASTER ORNAMENTS OF THE SIXTIES.
A·D 1871
Transition from Classic to Gothic
LONDON, 1862.
Fig. 1.
York stone slab.
Plaster surround
AN "INKERMANN TERRACE" LONDON, 1855.
Note the gradual decline of fine brickwork, and increased use of plaster ornament, mainly Classic.
"DOMESTIC GOTHIC," 1885
Cement and pebble dash "half timber"
Transition from double-hung sash to side-hung casement
"JACOBETHAN," 1905.

FIG 1.

By the end of the century domestic Gothic had run its course, and the small builder began to experiment with "Tudor" features of design. We note the arrival of the half-timbered gable, although the half-timbering was generally (literally) "rendered" in cement in order to avoid trouble with the London Building Act. This new style caused the disappearance of the double-hung sash, up to that time universal, but then seen to be strangely out of place. The transitional type of sash window shown in the sketch belongs to the period 1900 to 1905, when it was finally ousted by the side-hung casement. The double-hung sash did not appear again until the revival of the "Georgian" style about twenty years later.

So much for age groups in London housing in terms of external appearance. Every other large centre of population in this country shows similar features, differing only in detail according to local materials and methods of construction.

2. Changes in House Planning.

The plan of the small house does not offer so many indications of age as does the elevational treatment, since there is so little scope for variation. Nevertheless, when an entire borough is surveyed it is possible to note in chronological order three main types of plan, each with its minor varieties. Each type has had a long period of popularity; but of the three one alone survives, and is now known to us as the "universal plan" for the small family of modest means. (Fig. 2.)

Plan A was generally thought suitable, in London, for the decent working-class man and his family of the early Victorian period. Hundreds of houses of this type were built in every borough. Many still exist, by no means to be classified as slum property, but in fact eagerly sought by a respectable and desirable class of tenant. They are especially favoured by elderly couples without children and by people living alone, who can easily manage a little cottage of this kind, and who tend with pride the little back gardens usually provided. Such people are unhappy in modern Council flats, equally so in housing estates far away from their familiar surroundings.

Many of these houses have been well repaired by the local authorities as a war-time measure, and from a constructional point of view are good for another twenty years of life. Whether they can be tolerated by a critical post-war community is another matter. The narrow central staircase, sometimes winding crookedly out of the back room, unventilated, and lit (if at all) by a roof light which always leaks, is a bad and unavoidable feature of this plan. The w.c. must always remain an external one, which will freeze up with regularity every winter. Unfortunately these defects, bad as they are, do not normally compel the sanitary authority to "represent" this class of house for demolition. The attention of sanitary inspectors has had to be directed to a much worse class of dwelling—the back-to-back, or courtyard types; and there is still much to do before we can say that we are clear of these.

Type A was not extensively used after the decade 1850-1860, being succeeded by type B, which remained popular to the end of the century. It is a most accommodating layout for the small semi-detached or terrace house. It can have a basement, and a second or even third floor, thus providing the maximum accommodation for a minimum of street frontage, and securing the greatest possible return in ground rents. Originally intended for the use of one family, this type of house is now only too often let to two or more tenants, a separate letting being found on each floor —although sanitary accommodation is rarely provided in anything like the same proportion. This practice has long been tending to promote slum-like conditions in property which still has a very considerable expectation of life.

At the end of the last war, architects began to devote themselves to a problem from which they had previously held aloof—the design of the smallest class of house. The great wave of housing activity, impelled by successive Acts of Parliament and carried out by the local authorities, was largely directed by professionally qualified staffs—with the result that a new and much improved standard of planning made its appearance. Among other old, unsatisfactory features, the almost universal back addition was doomed; and at the cost of a few extra feet of road frontage the small house was economically planned under a single roof. (Type C.)

These three broad planning types can readily be shown on the map of a district by hatching, or by edging in colour. Neither method obscures the basic colour indicating the age group of the building. If a figure be added, showing the number of floors—or, better still, the number of families belonging to each house—we begin to get a picture of some of the most important aspects of the present housing situation.

There will, of course, always remain a number of properties which fall outside the foregoing simple classification. Such are the big double-fronted houses in the outer suburbs, shops with combined living accommodation, tenement dwellings and blocks of flats, bungalows. In order to prevent confusion arising from too many conventional signs, it may be necessary to omit the marking of some of these on the map. The larger the scale, the greater the amount of information that can be shown. (Fig. 3.)

3. Developments in Legislation.

Any survey of the existing housing situation in a district will be much more complete if consideration is given to the building by-laws and other enactments operative at the time of each successive age group. This factor has a most important bearing upon the present and future value of any particular house; but so far as the writer is aware, little if any attention has been given to it. At first glance it may appear, and to the lay mind it naturally does appear, that a house will last as long as it can be kept in habitable repair at reasonable cost. In actual fact, the house of (say) 1885 may have an excellent survival value, whereas that of 1875—only ten years older—may have none at all.

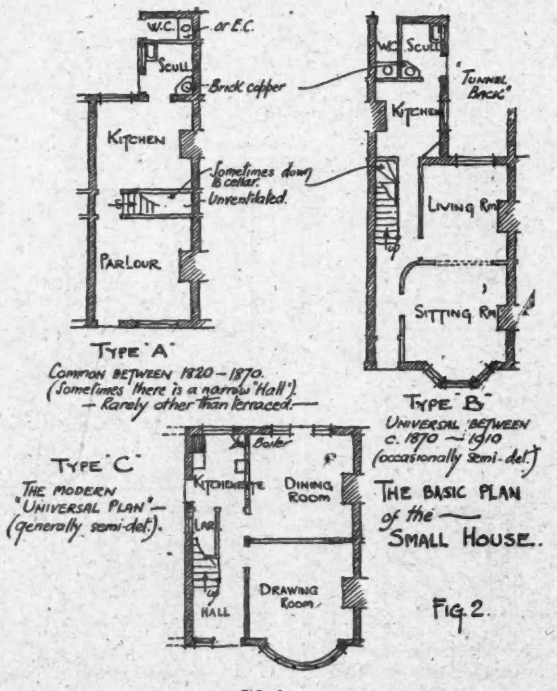


Fig. 2.

FIG. 2.

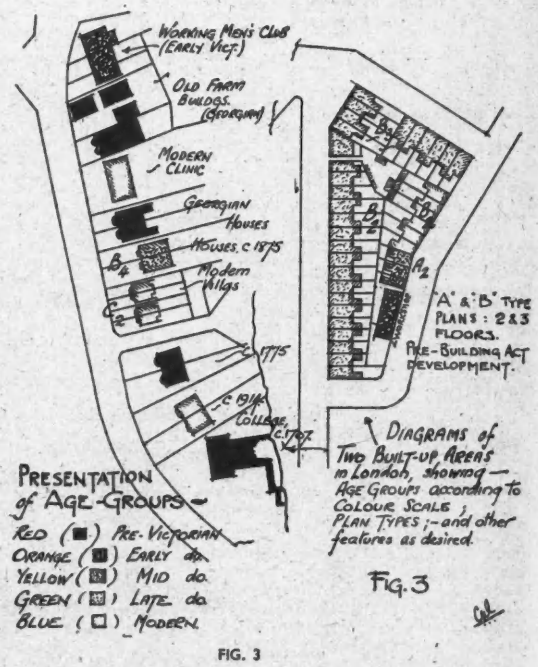

Working Men's Club (Early Vict.)
Old Farm Buildgs. (Georgian)
Modern Clinic
Georgian Houses
Houses, c 1875
Modern Bldgs
1775
c 1910
College
c 1707
'A' & 'B' Type Plans: 2 & 3 floors.
Pre-Building Act Development.
Diagrams of Two Built-up Areas in London, showing — Age Groups according to Colour Scale; Plan Types; — and other features as desired.
Presentation of Age-Groups —
Red (■) Pre-Victorian
Orange (■) Early do.
Yellow (■) Mid do.
Green (■) Late do.
Blue (□) Modern

Fig. 3.

FIG. 3

In 1891, by-laws were enacted in London requiring, among other things, the provision of concrete over the site of a building, foundation concrete under the walls in addition to footings, and an efficient damp-proof course in an approved position. Three years later came the London Building Act, with its widespread provisions for the improvement of planning and construction. The principle of an adequate rear space behind a dwelling seems to have first been laid down in this Act; and the kind of lay-out shown in Fig. 3 was henceforth made illegal.

Many of these new regulations had been foreseen, and the improvements already introduced in good-class work of the 'seventies and 'eighties. But there are, nevertheless, surprising numbers of houses in London alone, let as superior flats, and commanding excellent rentals, which have neither site concrete nor dampproof courses, are on that account permanently damp and subject to dry rot, and contravene some of the most elementary provisions of the by-laws in force to-day.

Acts and by-laws for the improvement of building are very rarely retrospective in effect; hence it will be found that the value of a house, considered as a healthy dwelling worth keeping in repair, may very often be decided by reference to such laws as were in force in the year of its erection.

We now have a further set of age-groups into which the houses of a district can be classified. In London, the following dates seem to carry special significance; and a similar method will no doubt suggest itself to anyone possessing a special knowledge of any particular town:

1844. The first Metropolitan Building Act was passed in this year.

1855. The year of the Metropolis Management Act, parts of which are still in force. The present drainage by-laws of London owe their origin to this Act.

The years 1855, 1862, 1871, 1878 and 1882 brought new or amended Building Acts, each of which advanced the standard of construction a stage farther.

1891. The year of the Public Health (London) Act, also of the set of by-laws already referred to. This Act brought in detailed regulations as to the habitability of underground rooms. The by-laws dealt with important points of construction.

1894. The year of the London Building Act, which had a marked effect upon planning and construction, particularly with regard to safety from fire. Houses erected after this year may, other things being equal, be considered as complying broadly with modern ideas of sound and healthy construction.

Conclusion.

This is the final classification suggested in a survey of housing age-groups, and it may well be that a second map is necessary to enable this information to be shown without overloading the original map with detail. It is unfortunate that these graphic methods of representing statistics are so limited; for with a subject so complex as housing one would like to be able to show so many other interesting features—the incidence of dry-rot and persistent dampness in a district; subsidences and settlements—to mention only a few. But it is only too easy to over-elaborate one's data; and there are other more pressing tasks to perform. One can only hope that at least some of the material above described will be available when peace returns, for the benefit of town-planners, architects, and all on whom the responsibility for future housing will be laid.

CORRESPONDENCE

[Whilst we are glad to publish letters on professional and other matters of interest to our readers, it must be understood that we do not necessarily endorse the remarks of correspondents, who will oblige us if they will express their views as briefly as possible.]

Unity in the Architectural Profession.

To the Editor of *The Builder*.

Sir,—Major Athoe, still more concerned with anonymity than unity, refuses to answer my questions about the membership of the I.A.A.S; the inference is obvious. His delusion that my object in starting this correspondence was to attack the I.A.A.S. and the misunderstandings which have become manifest in letters from other correspondents compel me to ask your permission to conclude by restating my arguments which are based on a belief in the necessity for unity in the profession.

(1) If architects are to take their rightful part in post-war reconstruction, it is urgent and essential in the interests of architecture and of the architectural profession that the profession should be united in one representative body democratically constituted.

(2) This end might be reached: (a) by the creation of a new body composed of representatives of the R.I.B.A., I.A.A.S., the Faculty of Architects, the Institute of Registered Architects, and the unattached architects, or (b) by the inclusion of all architects in the membership of one of these organisations, which would become the representative body for the whole of the profession.

(3) With all due respect to the three bodies which I have consistently termed "the alternative societies," their status and conditions of membership are such that they cannot be compared with the Royal Institute with its great prestige and over a century of service to the profession behind it. Although a numerically proportionate representation on a joint body would give a majority to the R.I.B.A., and a correctly weighted apportionment would give the Royal Institute an overwhelming majority, I believe that the establishment of another new body is both undesirable and impracticable.

The merging of the membership of the three alternative societies and the unattached architects into the R.I.B.A. is, in my opinion, a practicable solution. As your correspondent, Mr. T. M. Stafford, infers, the multiplication of institutions is highly undesirable. Separate bodies representative of town planners, structural engineers, surveyors and quantity surveyors are obviously necessary, but, providing it is democratically constituted, there can be no need for more than one institution to represent architects.

Moreover, the only examinations which qualify an entrant to the profession to practise as an architect are those which qualify him for membership of the R.I.B.A., and it is logical to assume that, providing the present standard is maintained, all future entrants will choose to become Associates of the R.I.B.A., and that unity will thereby be achieved in any case when the present generation passes on.

(4) That unity could be promoted now, when it is an urgent necessity, by the merging of the alternative societies and the unattached architects into the R.I.B.A., and this could be attained by the extension of the Licentiate class as I have advocated. Such a course might seem a hard sacrifice to make, but unity is worth the sacrifice, and once the present generation of architects is unified, continuance would be assured by the operation of the examination qualification for registration. The policy I advocate aims not at limiting the profession to members of the R.I.B.A. (as Mr. R. R. Tustin states), but, on the contrary, at the extension of the R.I.B.A. to include the whole of the profession.

The proposal is not much unlike that put forward by Mr. Gordon Jackson (which "Confrère" approves) except that I would confine membership to registered architects.

The R.I.B.A. has already invited unattached architects to apply for admission as Licentiates; I merely suggest that the invitation should be extended to all registered architects not already Chartered Architects, either directly or by negotiation with the alternative societies of which they are members.

My answers to Confrère's questions* of July 3 are as follows:—

1. No.
2. No.
3. Apply to Secretary, R.I.B.A.
4. In the interests of those who qualify by examination as well as by practice.

Cheshire. F.R.I.B.A.

Registration Council Scholarships.

To the Editor of *The Builder*.

Sir,—Mr. Colin Penn's letter on this subject contains so many inaccuracies that I trust your readers will remedy his omission and acquaint themselves of the facts before accepting his invitation to try to get members of the Council to see the point he has expressed.

His statement that applications for the scholarships from British subjects are now very few, is not fact. Actually, there were 128 *bona-fide* applications for this year's awards, and after the usual examination tests had been made the finance available made it possible for only eleven scholarships to be awarded. Even this small number of awards had the effect of exceeding by over £100 the moneys which had been allocated for scholarship purposes for this year.

Again, Mr. Penn asserts that the funds involved in granting scholarships to aliens "are not large," and whilst making every allowance for his enthusiasm for his subject, I emphatically deny him the right to make such a baseless assertion. As a member of the Registration Council,

* These questions were:

1. Would a counter speculation that he desires to bring these other bodies into contempt be correct?
2. Does he believe that they admit all and sundry to membership without thoroughly examining their *bona-fides*?
3. Will he state what form the examination takes to obtain the Licentiateship of the R.I.B.A.?
4. Why does he suggest that the practice of promotion direct from Licentiate to Fellow should cease, when obviously the Council of the R.I.B.A. has been satisfied with that procedure?

D

COMING EVENTS

Saturday, August 29.

The Ecclesiological Society. Visit to St. Sophia's Cathedral, Moscow Road, Paddington (2.30 p.m.), and to St. Sarkis' Armenian Church, Iverna Gardens, Kensington (4 p.m.). Conducted by Rev. Canon J. A. Douglas, Rector of St. Michael, Paternoster Royal.

Monday, August 31.

Living in Cities Exhibition. At Carnegie Library, Accrington. (Until September 14.)

Federation of Greater London Master Builders. Special General Meeting. Connaught Rooms, W.C.2. 2.45 p.m.

the Board of Architectural Education (which is the responsible body for recommending the awards), and of the Finance Committee which administers the funds, I do not know, and have no means of forming even a remote idea of the funds that would be involved, and there is no member of any of these bodies who would be so foolish as to hazard even a guess. Since Mr. Penn is not one of those whose duty it is to control the scholarships and the finance of the Council, it would be interesting to learn upon what grounds he makes such an astonishing assertion.

I will not take up valuable space by attempting to describe all the details involved but it can and should be stated that it is because—by reason of the widely differing amounts of the awards—of the utter impossibility of assessing the funds which will be required for completing the training of British students now serving with the Forces, that the Council has decided that " means shall not, for the time being, be made available for granting scholarships to aliens." In my opinion (and in spite of having " inside " knowledge, I must emphasise that it is only my personal view), the Scholarship Fund, together with the reserve and invested funds, will be hopelessly inadequate to meet the needs which will arise among British students after their discharge from the Forces. That view may not be shared by all of my colleagues on the Council, but if the happenings after the first World War can be regarded as a criterion, it will be found that my view is correct. Having been one of those students who suffered so bitterly last time, I hope I shall be forgiven for being an enthusiast in the interests of those whose lives will be similarly affected in this war.

I am quite sure that the Registration Council has acted with wisdom and foresight in this matter, and I very much doubt if even Mr. Penn would agree with the principle of granting maintenance scholarships to all aliens who might qualify at this juncture, and whose services we cannot be sure of retaining when we need them most after the war, if such action had the effect of rendering it impossible for probably hundreds of British students whose lives have been so violently interrupted, to complete their training for the profession of their choice.

WALTER O. HUDSON.

47, Victoria-street, S.W.1.

The Case of Dr. Curtis.

TO THE EDITOR OF *The Builder*.

SIR,—The architectural and civil engineering professions are now so closely linked together, that anything which affects one also affects the other. I therefore desire to draw your attention to the strange case of Dr. F. C. C. Curtis, who was employed in the Ministry of Works and Planning until June 30 last, and who has since been called up for military service under curious circumstances which raise matters of principle.

It appears to be a case of nationality. His mother was a German, and he was born at Frankfurt in 1903, his birth being duly registered at a British consulate in that city; his father, a professor in a German university, acquired dual citizenship. He never lost his British citizenship, although he had dual citizenship.

Dr. Curtis never ceased to be a British citizen. He married a German wife and came to this country in 1933; after a distinguished academic career he was employed in the architectural office of the Southern Railway for a year, and for two years after that as assistant to a Fellow of the Royal Institute of British Architects. He himself also became an Associate of that body, to which he would not have been admitted without British citizenship. He subsequently obtained an appointment as a lecturer in architecture at the University of Liverpool, and is still a member of the staff there.

In February, 1940, the University granted him leave of absence to take up war work, and his first employment was with Sir Alexander Gibb & Partners. Here it is vitally important to note that the Minister of Supply found no obstacle to the employment of Dr. Curtis on the design of Royal Ordnance Factories—work of a highly secret nature.

At the end of 1941 he was appointed to a post of great trust in the Ministry of Works and Planning, and his work met with the highest praise both from his colleagues and superiors. It is important to note that he was lent to the Ministry by Sir Alexander Gibb, and the firm was informed by the Ministry that Dr. Curtis would cease to be employed after June 30.

It should be emphasised that Dr. Curtis does not in any respect wish to avoid military service, but feels strongly that his abilities should be employed to the fullest possible effect in the best interests of the country. He has proved himself a loyal and patriotic citizen by his service in the Home Guard during Liverpool air raids.

I leave it to the judgment of your readers as to whether or not this is fair play, and hope that you will give the matter publicity in your valuable journal.

CHARTERED CIVIL ENGINEER.

City Architects and Reconstruction.

TO THE EDITOR OF *The Builder*.

SIR,—Byron said " A blob of ink can make a million think," and if the letter suggesting the appointment of official architects has effect in, say, five or ten years' time, the result will be considered satisfactory.

For the sake of argument, suppose that there are 500 cities and towns in this country which already have a town clerk, medical officer and engineer on their pay roll, and these 500 councils eventually appoint an official architect as well at a commensurate salary, it takes little imagination to see what a vast increase in usefulness and status will accrue to the architectural profession.

In reply to Mr. Crampton's letter last week, may I say that the power and influence and prestige of the British Press is of vital international importance. We are still a democracy, and the freedom of the Press is one of the main things that we are fighting for. Only thus can we put forward ideas which can be discussed in a reasonable manner. The very first thing Mussolini did was to suppress all free opinion, except his own. This is the way of tyranny, and cannot succeed in the long run. If one thing is proved by history, it is that it is impossible to suppress the free spirit of man for any length of time.

Finally, if this correspondence has made even 50 people give some serious thought to the subject, its publication will have been justified. The printing of letters in the Press has proved of the utmost value in securing action along the lines desired. If no immediate result is apparent, yet the seed has been sown and will bear its fruit in due season.

JUDEX.

Aberdeen.

(SEE LETTER ON " MODEL MAKING.")

Nursery Schools.

TO THE EDITOR OF *The Builder*.

SIR,—On reading the article on Nursery Schools in your issue of August 7, I found a note referring to the appointment of private architects in Hertfordshire for War-Time Nurseries which may be misconstrued.

As I mentioned in my address at the opening of the War-Time Nurseries Exhibition, a group of private architects was asked to be responsible for the erection of certain war-time nurseries in Hertfordshire which were not connected with existing County Council Schools. This arrangement was arrived at owing to the pressure of work in the County Architect's Department, which is dealing with all war-time nurseries not entrusted to private architects and with a large number of Emergency Hospitals, Maternity Homes, First Aid Posts, Cleansing Stations, School Canteens, etc.

PAUL V. MAUGER.

Welwyn Garden City.

Small Builders and the L.M.B.A.

TO THE EDITOR OF *The Builder*.

SIR,—Your correspondent Mr. W. A. Mather (August 14) seems to have put his finger on the right spot, and an example for reformation of Rule 4 is not far to seek. Generally speaking, whether he lives in a small house or a large one, or has a large or small income, a person has only one vote in the government of the country.

Maybe a good compromise would be one vote for every member, with an additional one for those whose annual wages reached £3,000, a third for over £30,000, and a fourth and final for those who paid the maximum subscription taken as approximately on a basis of over £300,000. It seems fair that there should be some difference, but not so that an agglomeration of a few large firms can swamp the rest.

S. E. LAMMING.

Stanmore, Middlesex.

Model Making.

TO THE EDITOR OF *The Builder*.

SIR,—Further to Mr. P. F. Burridge's article on model making, I, among many other persons, would welcome further articles on the subject. I submit the enclosed photograph of an ½-in. scale model of premises actually built, as a small contribution to the cause.

Although it took a great deal of my time—the evenings and week-ends for six weeks—yet much pleasure was derived therefrom. No interior details were put in; only a model of the shell was made. I would readily welcome and adopt a shorter method if perfection was not sacrificed thereby.

F. W. REEVE,
Registered Architect.

Teston, near Maidstone, Kent.

R.I.B.A. Examinations.

THE questions set at the Intermediate, Final and Special Final Examinations held in May and July, 1942, have been published, and are on sale at the R.I.B.A., price 1s. 3d., post free.

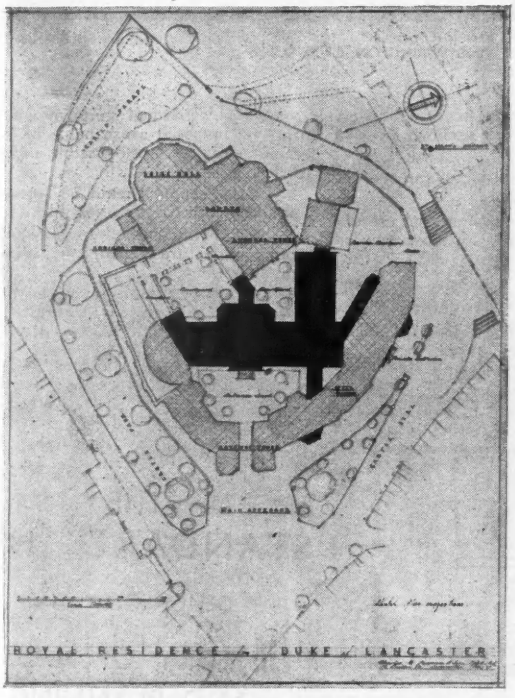
LANCASTER CASTLE

A SUGGESTED ROYAL RESIDENCE

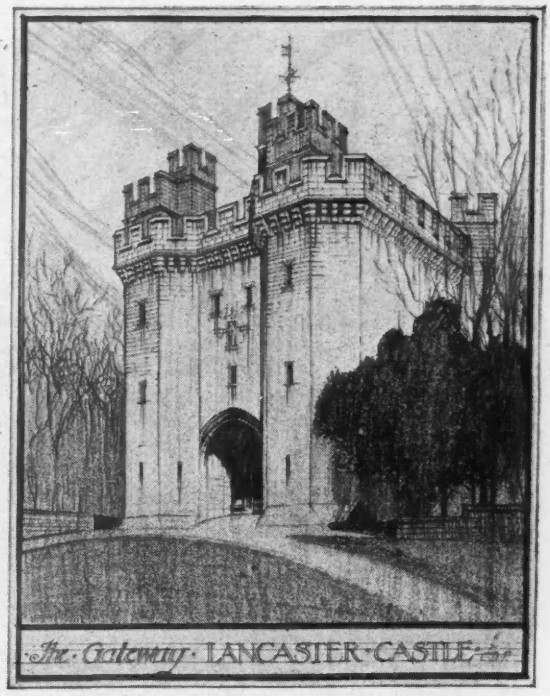
A SUGGESTION MADE BY THE HIGH SHERIFF OF Lancashire at a recent Mayor's Dinner that Lancaster Castle should be used as a royal residence for the Duke of Lancaster, was thought by many to be very fantastic and visionary and an impossibility. The idea is quite practicable (writes Mr. C. B. Pearson, F.R.I.B.A.) as will be seen by plans which have been prepared.

The main portion of this fine castle is not used to-day. It has ceased to be a prison and also it recently ceased to be a training centre for the Constabulary. Hence the question, What is to become of it? To the author of the suggested scheme the idea seems a very fine one indeed. Why not a Royal residence in this newly created city for the Duke of Lancaster, where the Royal Family could stay for a short time at least, say once a year? Without disturbing the Shire Hall, Courts and Records Room, a really fine residence is possible.

THE SCHEME.—In the first place the surroundings of the castle would need to be carefully dealt with. No work of historical value would be disturbed. The fine Gateway Tower, the ancient Lungess Tower, Well Tower, etc., would, of course, be carefully preserved. Much of the existing work which is of no historical value inside the castle would, of course, have to be cleared.



PLAN SHOWING SITING OF SUGGESTED ADDITIONS



FROM A DRAWING BY C. B. PEARSON, F.R.I.B.A.

Entering by the Gateway Tower, a wide courtyard is suggested, together with other fine courts and a service courtyard, these to be laid out on the best lines with trees, shrubs, flowers and grass and flagged courts. It is suggested that the ground floor be kept well up, with an entrance hall with a flight of steps leading to it. Behind the entrance hall the main staircase would be placed. On each side of this hall is a suite of reception or entertaining rooms with a service block for kitchen maids, etc., in a separate wing.

The main living rooms are arranged to have good aspects on the outer perimeter of the castle, thus avoiding these being on a court. Ample light with good views would thus be obtained. A private entrance with separate staircase is suggested at this point. These quarters include drawing-room, dining-room, morning-room, library, etc., with ample ante-rooms, the whole being easily reached by well-laid-out corridors.

The first floor would adapt itself for bedroom space for guests as well as private bed- and dressing-rooms with ante-rooms, bathrooms, etc. The service courtyard would be approached by a new gateway near the steps to the Priory Church of St. Mary. This courtyard would give ample space for cars and other necessary requirements. Without elaboration it will be seen that there are many other considerable possibilities in the scheme suggested.

The external treatment would be in keeping with the old work and could be made very effective. It should be pointed out that the material available for the preparation of the scheme has been limited. Many further details and other information would be required to be gone into. It is claimed, however, that sufficient has been shown to prove that this interesting idea is feasible.

[We regret that space does not allow us to show Mr. Pearson's plans in detail.]

THE PARTIALLY COMPLETED ROOF, SHOWING WIRING ON C.F. PURLINS.

THE STANDARD HUT

DESIGNED BY THE MINISTRY OF WORKS AND PLANNING

OF THE MANY TYPES OF HUTS EVOLVED during the last three years, one designed by the Ministry of Works and Planning and now illustrated is undoubtedly the most practical and efficient.

It is capable of rapidity of erection and has lasting qualities which would be of much service at the termination of the war. It is the outcome of experience gained in the design and construction of its forerunners.

Designed to speed the construction of Army camps, hostels for factory workers, and so on, the hut can be adapted for use as a dormitory, a recreation-room, a dining-room or a canteen. The problem before the Ministry has been :—

(a) To provide a very large number of huts in a very short time.

(b) To reduce to a minimum the use of materials in short supply, such as timber and steel.

(c) To reduce the necessity for site labour to a minimum by the utmost measure of prefabrication away from the site.

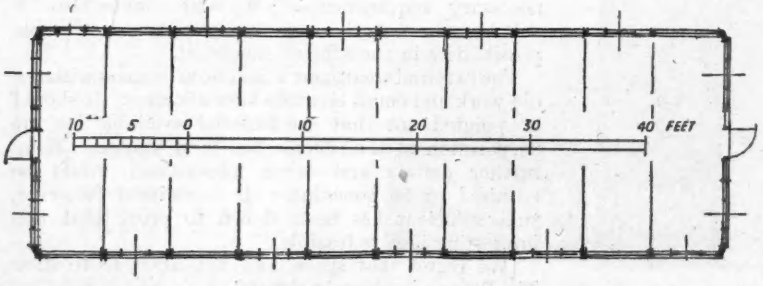
(d) To design a hut of such a character that :—

(i) the individual units of which the hut is composed are capable of fabrication by the greatest possible number of firms;

(ii) the supply should be spread over as many industries as possible;

(iii) the number of units required to be manufactured should be kept to a minimum.

The Ministry's solution to the problem is the M.O.W.P. Standard Hut, which is noteworthy in that it has a standard framework of reinforced concrete designed for mass production, which will take any of the numerous types of covering or



THE PLAN : TRUSSES OVER AT 6-FT. CENTRES. FLOOR AREA, 1,101 SQ. FT.

panelling now used in individual type huts —*i.e.*, bricks, clay blocks, plasterboard, wood cement, wood wool between asbestos cement sheets, and wood wool slabs cement rendered—whichever is nearest and most convenient—thus saving time and transport. This range of materials should avoid any bottleneck in production and offers the possibility of using various types of labour in erection. Asbestos cement sheet has been adopted as a standard for the roof of the hut, but the design is elastic, and permits the use of other roofing materials, such as felt-covered plasterboard panels.

The hut is designed for erection on standard foundations, irrespective of the materials which may be used for filling in the panels. This enables the contractor to construct the foundations before the huts arrive on the site and without knowledge of what type may be coming. The roof covering can be fixed in position immediately the framework is erected. The walls can be placed in position under cover of the roof, thus avoiding loss of time due to wet weather. Most of the wall panels are built dry. Prefabricated windows are provided for fixing in conjunction with the wall panels. The framework of the hut can be erected in 100 man hours and the hut completed in approximately 200 man hours.

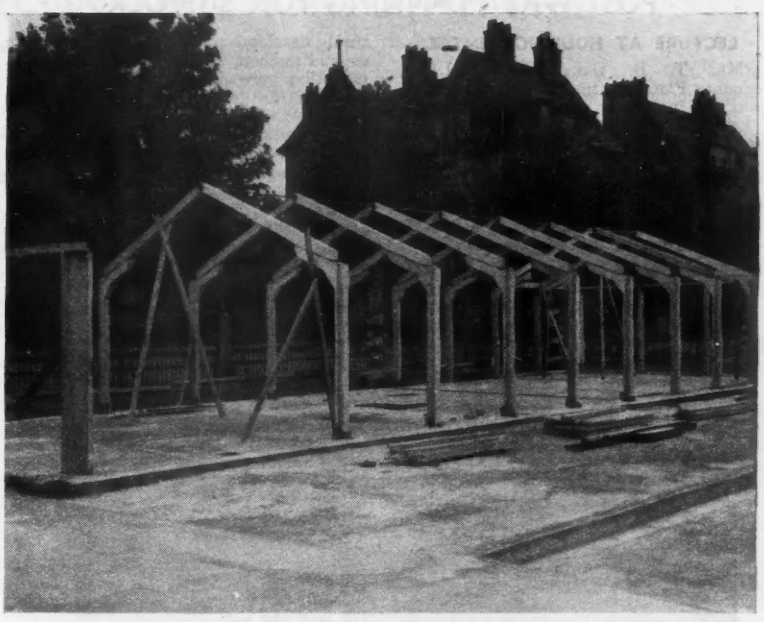
Constructional details are :—

FRAMEWORK. — Reinforced concrete transverse frame of ribs bolted to bracketed posts and held at the apex by a continuous bar. Corner and end posts flat-topped; concrete floor; sill and lintols span between the posts, providing uniform panels throughout for the wall cladding.

ROOF.—Timber purlins wired to the concrete ribs with "Big 6" or standard corrugated asbestos cement sheeting.

GABLE (SPANDREL).—Timber gable truss, prefabricated with standard corrugated asbestos cement sheeting. When brick or clay-block wall cladding is used, gable spandrels are of similar materials.

WALLS.—Filling of panels may be of any suitable wall cladding. The following are standardised :—



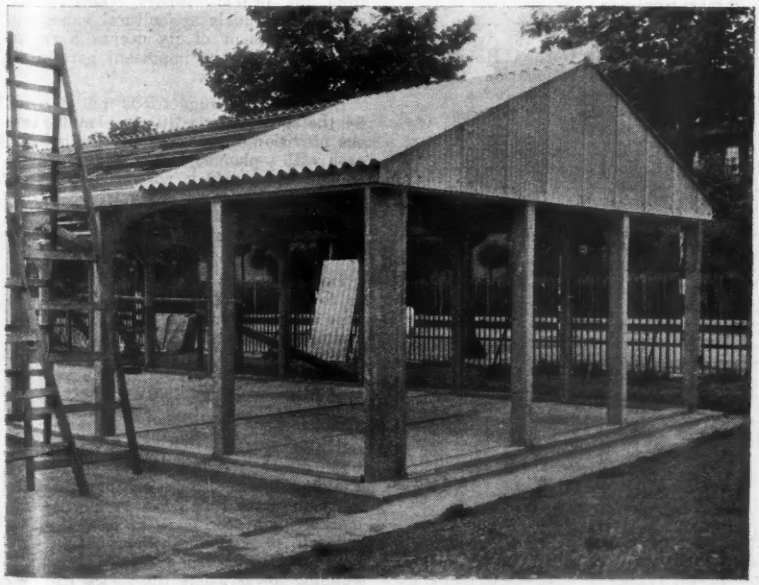
GENERAL VIEW OF THE TEMPORARILY ERECTED FRAMES. NOTE THE TEMPORARY WEDGING, AND IN PARTICULAR THE NECESSITY FOR LEAVING "A" FRAMES AT BOTH OF THE END CONCRETE FRAMES.

Brick.—4½ in. brick walling; *Clay Blocks.* — 4 in. hollow clay blocks. 8¾ in. high special blocks for gable bonding, external face painted; *Plasterboard.*—Prefabricated panels wood framed with plasterboard internally and felted plasterboard externally; "*Seco.*"—Prefabricated panels wood framed with wood wool between two sheets of asbestos cement; *Wood Cement.*—Special moulded blocks of wood cement laid dry. Lined with plasterboard after erection; *Wood Wool.*—Slabs of wood wool of special size bedded in cement mortar and rendered externally and internally after building in.

WINDOWS.—Prefabricated windows with top-hung sash opening outwards in the upper central light. Sides covered with asbestos sheeting externally and plasterboard internally or left for full glazing. An additional opening sash can be provided in the lower portion if required. The windows are incorporated in the plasterboard units where this type of wall cladding is used.

DOORS.—Prefabricated units incorporate a door, with surround of asbestos cement externally and plasterboard internally. With "Seco" wall cladding a door unit is provided with flanking panels of the same material.

Each ten-bay hut is 59 ft. 8¼ in. long by 18 ft. 6 in. wide, giving a floor area of 1,104 sq. ft. There are 14 windows, and doors at either end. The height, from floor surface to underside of roof, is 8 ft. at eaves and 11 ft. 10 in. at apex. The whole hut has been analysed by design, construction, erection and costs in a publication brought together by the Ministry of Works and Planning.



APPEARANCE OF FINISHED ROOF. THE OFFCUTS FROM ONE SET OF GABLE SHEETS FORM THE GABLE SHEETS AT THE OPPOSITE END. DRIVE SCREWS ARE USED THROUGHOUT.

THE M.O.W.P. STANDARD HUT

POST-WAR PLANNING FOR SUFFOLK

LECTURE AT HOUSING CENTRE.

MR. T. B. OXENBURY, L.R.I.B.A. (County Planning Officer for East Suffolk), was the principal speaker at a meeting of the Housing Centre, held at 13, Suffolk-street, S.W.1 (Miss J. Tyrwhitt presiding), when the post-war planning of Suffolk was the subject under discussion.

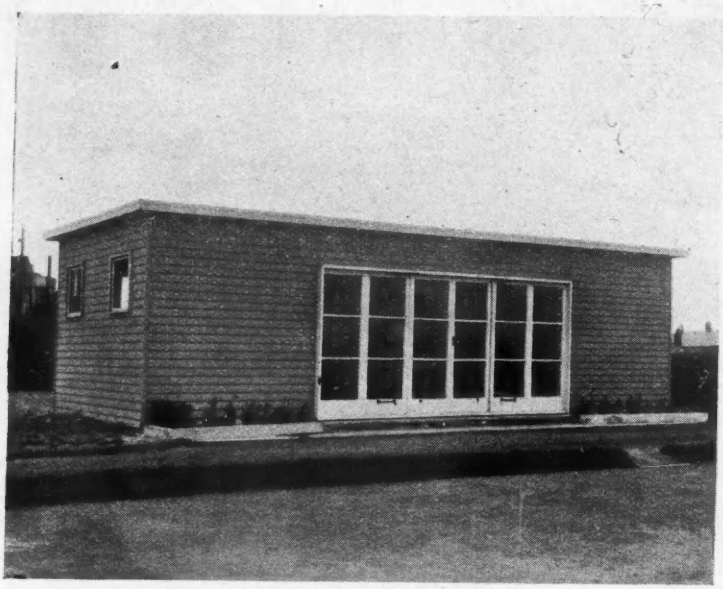
The lecturer said that Suffolk was now and had always been predominantly agricultural, but in fostering a flourishing rural development it was important to expand to their fullest extent those industries that were closely connected with the products of the soil. The future of the sugar-beet industry could not be predicted, because it depended so much on the world situation after the war; but the canning of fruit and vegetables, jam-making, basket-weaving, and the flax industries now developing could become an important feature of Suffolk life. There were certain main reasons that might qualify an industry for establishment in a rural area. First were processing industries, *i.e.*, the handling and packing of products of agriculture. Dairying and canning were examples. Next were industries that used a product of the land as raw material, *e.g.*, the making of cricket bats or the preparation of vegetable extracts and essences. Third came extractive industries, such as brickmaking. In Suffolk there were several small outcrops of chalk, sand was readily obtainable, and the brick industry at one time had found sufficient clay to keep small brickfields working. Only a few of these were now in operation, and it would be interesting to discover why the number had been reduced.

Suffolk's industrial centres were at Leiston, Stowmarket, Bury St. Edmunds and Ipswich, and were mainly occupied by the engineering industries; while textiles were produced along the valley of the Stour. Some of these textile factories had been established as the result of the war, and the proprietors said they intended them to remain. Many of Suffolk's smaller towns had grown beyond village status, but yet were not capable of maintaining those social amenities which were associated with a well-planned and flourishing community; and when considering the county as a possible reception area for light industry, or discussing plans for developing rural industries, we turned to those towns. He was a firm advocate of the revival of village life, and thought great opportunities would present themselves in post-war planning to bring this about. Existing centres of communal life had tradition and character, and housing for the agricultural population should be provided in those centres, accompanied by facilities for fuller social life and such amenities as a supply of pure water.

Abundant sunshine and low rainfall made East Anglian coastal towns popular as seaside resorts. A chance traveller, or someone seriously interested in ecclesiastical architecture might take a holiday in the heart of Suffolk; but holiday-makers were drawn to the east coast, where large tracts of sandy heathland rose up to 50 ft. above the marshes which separated them from the pebble beaches. This coastal strip was of little agricultural value, and the development of its use as a recreational zone took an important part in the planning of Suffolk.

Among other suggestions put forward by the speaker for post-war planning was the provision of new towns of limited size, each with a planned agricultural belt large enough to provide it with such things as milk and other dairy products, fresh fruit, vegetables and meat. He considered that to provide for a town of 40,000 people, 7,500 acres of land was necessary.

In reply to questions the lecturer said, as to the control of the external appearance of farm buildings, that he agreed restriction here should not be too rigid, but he thought farm buildings should come within the control of the planning authority, and not the external appearance only; the siting also was an important feature of development. He himself liked the weatherboard tiled barn: it was suited to the Suffolk landscape. Building in sun-dried clay lumps was no longer practised in East Anglia. Stowmarket might become a satellite town for Ipswich, or a small town might be built between Stowmarket and Ipswich. In rebuilding towns where the centre had been destroyed, the new centre should be entirely for civic and business purposes. It should contain no dwelling-houses at all.

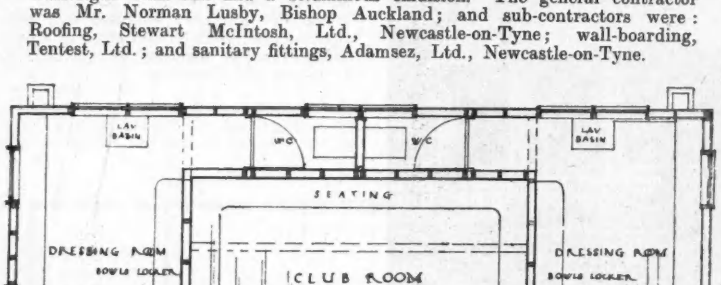


GORDON HOUSE PAVILION, DURHAM

DESIGNED BY MR. F. G. FRIZZELL, A.R.I.B.A.

MR. C. G. KEMP, A.R.I.B.A., CHIEF ARCHITECT TO THE MINERS' WELFARE COMMISSION.

Situated on the Miners' Welfare Recreation Ground at Gordon House, near Bishop Auckland, the Pavilion gives pavilion accommodation for bowling members of the local collieries. The building, which includes a common room, is constructed of timber, faced externally with weather-boarding and internally with wall-board. The roof is boarded and rendered watertight with felt and a bituminous emulsion. The general contractor was Mr. Norman Lusby, Bishop Auckland; and sub-contractors were: Roofing, Stewart McIntosh, Ltd., Newcastle-on-Tyne; wall-boarding, Tentest, Ltd.; and sanitary fittings, Adamsez, Ltd., Newcastle-on-Tyne.



THE PLAN

R.I.B.A. RECONSTRUCTION COMMITTEE

FIRST GENERAL STATEMENT OF CONCLUSIONS

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INTRODUCTION.

Appointment of the R.I.B.A. Reconstruction Committee.

The Council of the Royal Institute of British Architects appointed the Reconstruction Committee in March 1941 with the following terms of reference:—

"To consider and formulate the policy of the R.I.B.A. and the Allied Societies on the subject of post-war reconstruction and planning in the widest aspect and to report to the R.I.B.A. Council."

The Council also asked the Allied Societies to set up in each of the Civil Defence Regions Regional Reconstruction Committees to work on the special problems of their own Regions.

Work of the Committee.

The main Committee sub-divided itself into six groups to work on special aspects of the Committee's task as follows:—

Planning and Amenities.
Housing.
Building Legislation.
Architecture and the Building Industry.
Professional Status and Qualifications.
Building Technique.

The Committee have published five Interim Reports entitled as follows:—

No. 1. Planning and Amenities.
,, 2. Wartime Housing.
,, 3. Building Legislation.
,, 4. Reconstruction and the Architectural Profession.
,, 5. Legislation Affecting Town and Country Planning.

Other Interim Reports are in course of preparation, but the Committee has decided that this Statement should now be published giving a general summary of the conclusions already reached.

Sub-Division of this Statement.

The work of architects is not primarily the designing of fine buildings as ends in themselves. It is rather the satisfaction of certain human needs and aspirations, both individual and social. The architect's task is therefore first to learn to understand those needs as fully as possible, and secondly to know and use the best possible means for satisfying those needs.

A similar approach is adopted in this Statement: the first section dealing with human needs as a foundation for reconstruction, and the second with a national plan to meet these needs.

SECTION I.

HUMAN NEEDS AS A FOUNDATION FOR RECONSTRUCTION.

(a) Individual and Public Needs.

"That men may live out their lives in freedom from fear and want" is the fundamental principle of the Atlantic Charter on which our leaders "base their hope for a better future for the world." This gives us the framework in which the more detailed proposals for reconstruction should be set.

But "freedom from fear and want" is negative. The needs of people are positive. From the standpoint of physical reconstruction the essential needs of the *individual* are:—

1. Suitable work in clean, healthy and cheerful surroundings.
2. A convenient and attractive home, forming part of a community capable of evoking local patriotism and civic pride.

The most essential *public* needs affecting physical reconstruction are:—

1. A firmly established agriculture.
2. A prosperous industry, well located.
3. An efficient system of transport.

These needs have been set out in the barest outline. Yet *any* comprehensive attempt to satisfy them would be a real step forward; and to state them is enough to show that our present haphazard methods of development do not in fact produce what we most want. There is no one whose business it is even to try to arrange that they shall.

To take only two examples: the unsatisfactory location of our industry and the inadequacy of our streets to cope with modern traffic show that the nation needs new equipment to fit it for modern conditions.

Local action alone cannot cope even with the local problems, and many of the problems are national in scale. Behind all such problems lies the pressure of a large population in a small country, and the consequent need for the best possible use of every acre of its limited land surface. It is for these reasons that there has been such an overwhelming demand for a national plan.

(b) Practical and Æsthetic Needs.

All these needs, individual and public, might be efficiently met on the practical side and yet, in the result, the visible face of England might not be the better for the change but immeasurably the worse.

The public is right in expecting and demanding that the opportunity afforded by post-war reconstruction shall not be thrown away: buildings and towns must be both convenient for use and pleasant to live in.

A civic sense has been slowly but very firmly growing up in the people. One form of it is to be seen in the demand that the slum areas, of which they are now acutely ashamed, should no longer be tolerated. The effects of war damage among these areas is looked upon, not as a calamity, but rather as a heaven-sent opportunity for total reconstruction and not for repair or renovation. This form of civic sense is attributable to a desire to improve living conditions, that is to say, it is inspired by the social sense, which is very much alive to-day.

There is another form in which the civic sense shows itself, and that is inspired by the visible appearance of things. A simple instance of it in operation can be seen in the lately aroused determination to check ribbon development, because that constitutes an offence to the eye. Here there is seen a desire to put a stop to disorderly, ugly things.

But there exists among the people a far broader and deeper feeling than this negative attitude to the creation of beauty. They are making a positive demand. They want to ensure that their cities and towns should be better to look at, better planned. They are aware of the dignity and the beauty of the centres of Edinburgh, Bath and Oxford, and it is some measure of that kind of beauty which they wish to see created in their own cities. They mean, too, that these newly-awakened senses shall operate as a combined motive force, not in a few scattered instances but everywhere in any undertaking of reconstruction.

SECTION II.

OUTLINE OF A NATIONAL PLAN TO MEET THESE NEEDS.

(a) Positive Policy.

On February 26, 1941, the Minister of Works and Buildings announced in the House of Lords:—

"In the meantime and now I am authorised in the preparatory work to proceed on certain assumptions: (i) That the principle of

planning will be accepted as national policy and that some central planning authority will be required; (ii) that this authority will proceed on a positive policy for such matters as agriculture, industrial development and transport; (iii) that some services will require treatment on a national basis, some regionally and some locally."

In the Government announcement just quoted a " positive policy " in planning is promised for agriculture, industry and transport. We assume that in promising that it will proceed on a " positive policy " in planning, the Government means that it will produce a national plan and will take definite action to ensure that the plan shall be implemented.

A positive policy in this sense implies a far-reaching and most welcome change in method from that which has hitherto been adopted. In the years before the war the schemes produced by planning authorities have been primarily restrictive in character: confining certain types of development to certain areas, but leaving it to chance whether any development took place or not. For this limited purpose a plan does not need to be worked out in any detail.

But the temper of the public will rightly no longer tolerate planning which is conceived on such negative lines. The public rightly want to see detailed plans of what is proposed, and when the plans have received public support they want to be assured that they will be carried out.

Every word, however, of the Government announcement is welcome so far as it goes, but it needs amplification. We need assurance that the Government's " Positive Policy " will deal with individual as well as public needs, and we need a demonstration of the positiveness of its policy by four positive acts :—

(1) Creation of the machinery to *produce* a national plan.
(2) Creation of the machinery to *carry out* the national plan.
(3) Creation of the plan.
(4) Execution of the plan.

(b) Urgency of Planning.

Of these four positive acts it is clear that the last cannot be contemplated till after the war. There are obvious difficulties in undertaking the other three in war time. But these difficulties must be overcome, at least to the extent of producing the general lines of each before the end of hostilities. Otherwise the whole idea of a national plan may prove fruitless.

When peace comes attempts to start plans or create planning machinery will in many cases be swept aside by the urgency of the demand for buildings of almost any kind almost anywhere.

The plan must therefore be ready, at least in outline.

(c) Machinery for Planning.

1. Nature of a National Planning Authority.

The Committee fully realise that it is not for architects alone to devise machinery by which a national plan can be realised. But the following facts are clear :—

i. To obtain a national plan there must be a National Planning Authority.

ii. At least four Government Departments will be deeply involved in the plan.

iii. Unless all the Departments concerned are to be amalgamated into one monster Department, the National Planning Authority must be so devised that it has the power to co-ordinate the proposals of the various Departments and to overrule the views of any single Department when necessary for the sake of the plan as a whole.

iv. Some parts, at least, of the plan will be such that neither private enterprise nor local authorities will be able to execute them. A central executive body will be necessary to ensure the execution of such work.

There should therefore be, under the National Planning Authority, not only a National Planning Commission, containing experts in many different fields, to draw up the plan, but also a Development Commission to ensure its execution.

This Development Commission should be made responsible :—

i. For ensuring the smooth working of the plan in all development whether executed by itself, by Government Departments, by Local Authorities or by private enterprise. This would involve dovetailing together those various means of getting the work done by advice, by encouragement, and by stepping in and undertaking the execution of work when necessary.

ii. For providing Local Authorities and Public Utility Companies with the necessary credits for the execution of local schemes. As explained below under " Finance," Local Authorities can and should be relieved of the financial burden.

2. Precedents for Public Development.

In this connection attention is called to the Tennessee Valley Authority. A study of the very interesting methods adopted and of the experience gained should prove valuable in regard to (1) methods of winning co-operation from the public; (2) methods of making and executing a large-scale plan; and (3) methods of relating the executive to the planning departments. Other precedents which might provide useful experience are : (1) the Ministry of Transport in dealing with trunk roads and bridges; (2) the Ministry of Agriculture in directing, and in some instances taking over, the production of food through the County Agricultural Executive Committees; and (3) the Ministry of Supply in directing, and in some cases taking over, the production of munitions.

3. Organisation of Planning Authorities.

Assuming the form of the National Planning Authority to fulfil the requirements stated above, the organisation as a whole would presumably consist of :—

i. The Central National Planning Authority : to initiate all planning measures whose scope is beyond the capacity of Regional Authorities, and to see that all urgent plans are executed as labour and materials become available.

ii. Regional Offices of the National Planning Authority : for Regions not necessarily identical with Civil Defence Regions, to deal with such parts of the central plan as affect the regional area, and to co-ordinate sub-regional planning schemes prepared by groups of local authorities.

iii. Groups of Local Authorities : to prepare local (sub-regional) planning schemes.

Experience shows this grouping to be essential. The grouping should be voluntary so far as possible, but compulsion must be used where voluntary grouping fails. The composition of those groups must be approved by the Regional Authority.

(d) Legislation.

1. In place of the existing multiplicity of Acts, By-laws, etc., which are catalogued at length in Interim Report No. 3,* a National Code should be compiled to cover the whole country, administered from a single office in each locality.

This National Code should be in three parts :

i. A code dealing with planning for Human Needs, or what might be termed a " Code of Living Standards." (This will form the subject of a further report.)

ii. A code dealing with Structural Standards or a " Code of Building."

iii. A code dealing with the Financial Provisions necessary to achieve these ends.

It is suggested that the Code of Living Standards should be in two parts :—

(*a*) Standards of amenity, which should be advisory, not compulsory, so that the standards may be high and may provide a touchstone for judging particular proposals. These would cover such matters as housing standards, areas of open space in proportion to population, provision of communal buildings, etc.

(*b*) Health and Safety Precautions which would be mandatory.

2. Under this National Code only one application should be necessary for the approval of plans; but submission of plans for approval should be compulsory for all types of buildings, with no exceptions.

Supervision, which should be by properly qualified officers, should be administered from a single office in each locality. When localities are small, a single qualified officer might be shared between neighbouring Authorities.

3. As explained more fully in Interim Report No. 3, a National Building Board should be appointed, which should not be under Departmental control, its members being drawn from :—

The Building Research Board.
The British Standards Institution.
The building industry and trades.
The building professions.
Central and Local Government.

Its duties should be :—

i. To set up a Building Research Organisation.
ii. The formulation of the Code of Building.
iii. The periodic revision of the Code of Building.

The word " Building " is to be understood to include Civil Engineering throughout these recommendations on Legislation.

(e) Organisation of the Building Industry.

The work of reconstruction will necessitate a great expansion of the building industry, possibly up to three times its pre-war size.

For negotiations with Government Departments a high degree of integration is desirable, so that the industry may be an entity with a means of voicing its opinions.

The industry consists of four main groups :—

1. The employers.
2. The operatives.
3. The professional bodies.
4. The manufacturers and distributors of building materials.

Co-ordination of these four groups can best be achieved through the machinery of a central council, which might be the organ of liaison with Government Departments.

The volume of building work required for reconstruction, and also the present and potential resources of the building industry,

* *Law and Building Structure.* Jnl. R.I.B.A., November, 1941, pp. 3-4. *The Builder,* November 14, 1941.

must be surveyed over a long term of years, with a view to avoiding booms and depressions.

Consideration should be given to the possibility of devising some form of unit for measuring the volume of reconstruction work required per unit of time, and also some corresponding unit of output of the industry, so that these two might be roughly equated, and the degree of expansion required in the building industry might thus be calculated.

(f) Building Technique.

Efficient building technique is always desirable, but, owing to the acute shortage of building labour and materials in relation to the volume of building which will be required after the war, it will be essential that the techniques adopted shall :—

1. Produce *good building* with the utmost possible economy.
2. Produce the *maximum* possible *output*.
   (i) Through the traditional methods of the building trades, brought up to date.
   (ii) Through the utilisation of the greatest practicable proportion of factory production to site work, so that factories and factory workers formerly employed on munitions may relieve the pressure.
3. Provide a proper balance between first cost and cost of maintenance.

Surveys which have been made for the Committee bring out the following facts :—

1. *In the period* 1919-1939.
   i. There has been considerable improvement in the range and quality of building materials, partly due to British Standard Specifications.
   ii. There has been some tendency for By-laws to abandon the older rule-of-thumb standards requiring, for example, certain thickness of materials for certain purposes, and to substitute the more scientific method of demanding that the parts of the structure shall be adequate for their purpose, based on the known performance of the proposed material.
   iii Standardisation has not been utilised to any considerable extent except for doors and windows.
   iv. There has been a preference for traditional building methods as against the assembly of any form of large pre-fabricated units on the ground that pre-fabrication methods are :—
      (*a*) Experimental and therefore risky.
      (*b*) Upsetting to established traditions.
      (*c*) Liable to be inferior in weather resistance, insulation, maintenance cost and appearance.
   v. There has been a lack of guidance for architects and builders as to the relative efficiency and suitability of the various materials and apparatus offered to them.
   vi. The results of research have been disappointing for the following reasons :—
      (*a*) A large proportion of the research carried out by private firms is used for their own purposes and is not always available to the general public.
      (*b*) The work of the Building Research Station is most valuable, but it is not possible for the Station to publish information detrimental to any manufacturer.
      (*c*) There is a very serious time lag between the publication of the results of research and the general adoption of those results in building practice. This is partly due to a lack of publicity for the work of the Building Research Station.
      (*d*) The Building Research Station has not so far been given the opportunity of erecting and studying large-scale experimental buildings.
   vii. Technical advance has been hindered by lack of co-ordination between the efforts made by separate interests. For example :—
      (*a*) Out-of-date By-laws restricting the use of research findings.
      (*b*) Building practice lagging behind technical knowledge.
      (*c*) Unco-ordinated development of materials.
      (*d*) Lack of long-term observation of the behaviour of building.

2. *During the War.*

Owing to central control and the urgency of the problem, research has been highly successful, and immediate attention has been paid to its results. This has been true of air-raid shelters, and, to a lesser degree, of factory design and of hutted camps.

LESSONS TO BE LEARNT FROM THESE SURVEYS.

The contrast between the two periods is sharp.

Public control of the building industry will have to continue after the war, and the techniques adopted in building will affect, and be affected by, public policy on imports, transport, etc.

The Committee therefore strongly recommend that, coupled with centralised control, centralised research be expanded and made independent of outside donations by a sufficient Treasury grant. This centralised research should be under the charge of the Building Research Organisation proposed under the heading "Building Legislation." The Committee also recommend that the Building Research Organisation co-ordinate useful private research with centralised research, and take steps to ensure that the results receive adequate publicity.

(g) Finance.

Little will be done if Local Authorities must themselves raise any considerable proportion of the cost of reconstruction in their areas.

Little will be done if private interests are allowed to obstruct reconstruction and cause long delays whenever they feel that the public purse can be held to ransom.

Little will be done if the finance of reconstruction is regarded primarily as consisting in the raising of further huge sums of money.

Money must be the servant, not the master, of the community. It should be, and can be, an instrument for obtaining services when those services can be made available. The common sense of ordinary people can see that the problem is soluble. It is for the financial experts to say how. Admittedly this may need great intelligence, and may involve entirely new methods. Lord Keynes has more than once declared that the problems of reconstruction are problems of finding the necessary labour and materials, not problems of finding money.

The Committee urges that in drawing up its plans for reconstruction the Government should :—

1. Relieve Local Authorities and Regions of the financial burden.
2. Simplify the machinery for dealing with private interests which may feel themselves injured by a planning scheme. Tenderness for the rights of private property can be carried to excess.
3. Arrange for the expansion and distribution of the resources of the building industry in whatever manner seems best for the national interest, and devise the financial measures necessary for that purpose.

SECTION III.
FILLING IN THE PLAN.

The Drafting Commission drawing up the National Plan should have as early as possible for their guidance the results of the research recommended in Interim Report No. 1 on the development of such services as roads, railways, canals, docks, barrages, water power, water supply, drainage, electricity and gas supply.

At this stage the Committee only wish to suggest a few general points to be borne in mind by that commission and to add some rather fuller notes on the subject of Housing.

(a) General Suggestions.

1. CONTROL OF LAND.

All land, without exception, should be publicly *controlled*, whether it is to be publicly or privately *owned*. In either case probably most land would be privately occupied.

2. LOCATION OF INDUSTRY.

The great building programmes which must be undertaken will be so profoundly affected by any changes in the location of industry that Local Authorities will only be able to make tentative estimates of their needs until Goverment policy on this subject is formulated.

3. PRELIMINARY LOCAL WORK.

It is important that the Regional Committees proposed in Section II, even if only in skeleton form, should be set up as soon as possible to approve the grouping of Local Authorities as planning bodies. As soon as this is done the Groups of Local Authorities should be encouraged to start on their plans. And even before that, some preliminary work could be started by some of the individual Local Authorities, who should at all stages keep the Group informed of their views on local matters which may affect the Group plan.

As all work done in the earlier stages will be to some considerable degree tentative, because of its dependence on the unknown National Plan, it should be made clear to the Local Authorities concerned that, whatever financial arrangements are finally made, they will not have to bear any part of the financial cost of changing their preliminary plans to fit in with Regional or National requirements.

4. DECENTRALISATION AND NEW TOWNS.

In the existing large towns and conurbations the need for decentralisation is generally agreed.

The building of a certain number of new satellite towns is complementary to this decentralisation, as the removal of industry and population to the new town will provide the opportunity for clearances in the old.

Regrouping within the boundaries of existing towns is as important as decentralisation. The burden of daily travel, for example, could be greatly reduced by a more rational grouping of work-places and homes.

New towns should when possible be developed from existing small towns or villages, so that they may not have to start devoid of any local traditions.

5. LOCAL IMPROVEMENT FUND.

It is recommended that there shall be in each district a local improvement and open spaces fund provided partly by Government grant, partly by a limited local rate, and partly by contributions payable by all developers, thus providing for essential widenings, open space reservations and proper maintenance as and where development takes place.

6. Relation of Housing to Town Planning.

During the inter-war period, Local Authorities and private enterprise alike almost invariably aimed in their housing programmes solely at the provision of homes. The fact that these have been built with little variation in size or type has led to rigid segregation of social classes. This is one of the bad results of treating the provision of housing as an isolated activity. The real need is for settlement groups fully incorporating the activities of a community. In the larger schemes there would be needed shops, communal buildings (spiritual, educational, social, etc.) and open spaces for recreation. It rests with the town-planning authorities to co-ordinate and relate all the necessary elements in a planned community; and the very closest relations must exist between the housing and town-planning committees in an area. In the same way in the Region or at the centre the closest co-operation is necessary between the housing and town-planning authorities.

(b) Housing.

1. The Importance of Housing in Post-War Reconstruction.

The provision of housing will demand early priority in post-war reconstruction. The vast programme ahead and the urgency to supply needs may bring certain pressures—possibly undesirable—to bear on the form that housing will take. It is therefore important to bear in mind that housing has always constituted and will in future constitute the largest factor in a country's building, and as such, reflects the pattern of a country's civilisation. For these reasons it is essential that :—

(*a*) Housing should form part of a well-conceived plan for the re-equipping of the country;

(*b*) Housing, in that it should incorporate standards fulfilling the desires and requirements of the population, should be able to call for the best technical advice and knowledge available. The selection of suitable architects requires careful attention.

2. Post-War Housing Need.

Estimates will have to be based on : :—

(*a*) The number of housing lost through war damage;

(*b*) The number of houses required to supply the needs of an increasing number of families;

(*c*) The need to replace obsolescent houses, aggravated by the fact that building was brought to a standstill during the war;

(*d*) The need to continue to secure a reduction in overcrowding.

These four items cannot yet be estimated.

It is estimated that whatever final figure is reached, an immediate programme of two to three million houses can be envisaged, without calculating for the accumulations that will arise as years go by. Arrears on maintenance are calculated to be likely to absorb the available building industry for a whole year after the war. The position facing the building industry is a serious one, and must be handled on a national, not a local scale.

3. Planning the Post-War Housing Programme.

Only by careful planning ahead can housing needs be met. The delays in 1919 in the supply of houses can be attributed to lack of full realisation of the need to relate a housing policy to a policy of development of building labour and materials. The urgency of the situation may require the sub-division of the programme into an emergency programme and a long-term programme. Both of these will require to fit into a national scheme under which the following points will arise :—

(*a*) *Location.* The war may result in movements of population. A policy of re-location of industry may affect distribution of need, and will affect a long-term programme. An immediate post-war programme for the next two or three years could now be outlined by local authorities in a survey of the need to rebuild bombed areas and to meet a limited amount of normal increase of population. The larger long-term programme to fit in with a future redistribution of industry can then be formed. Close co-operation will be required here between planning and housing agencies. Such a programme envisages the control over land user recommended above.

(*b*) *Method of Construction.* The building programme will have to be carried out with a view to the labour and material available, and may consist of :—

i. Temporary quarters, with a licensed length of life;

ii. Accommodation erected by traditional and alternative methods of construction;

iii. Reconditioning.

4. Housing Agencies.

i. Local authorities will remain the housing authorities in their areas, but future movements of population, and the varying degree of war damage, may bear unequally on them. Some form of national or regional assistance both in finance and in execution must be contemplated to secure even distribution of the burden of work and of the cost.

ii. It is probable that private enterprise activity in building will receive an impetus as a result of the compulsory savings scheme. Building society finance will stimulate new house development, but it is important that the uncontrolled speculative element should be omitted from house building. There is no suggestion that the provision of houses by private builders should be discouraged, provided that excessive profits on land and buildings are eliminated, and that standards both in design and construction are reasonably good. Control over speculation can be exercised in the following ways :—

(*a*) Control over land, through town-planning powers;

(*b*) Control over design and layout, also through town-planning powers;

(*c*) Control over building practice, probably through the National House-Builders' Registration Council.

iii. A national policy for house production will have to be formulated with the object of co-ordinating the work of the various house-building agencies and with a view to securing more level distribution of work and of results. The Developing Commission proposed earlier in this statement would be responsible for carrying that policy into effect in co-operation with the responsible Ministry.

5. Research.

Research into consumer needs should be encouraged in addition to the research into building technique recommended in Section II.

6. Housing Standards.

The R.I.B.A. report to the Dudley Committee of the Ministry of Health will be published shortly. This will include recommendations on standards of accommodation.

SECTION IV.
THE ARCHITECT'S CONTRIBUTION.

(a) In the History of Town Planning.

Reference was made at the end of Section I of this report to the public demand for something of the quality of Edinburgh, Bath, and Oxford in the replanning of our towns and cities. Looking farther afield, Athens, Rome, Florence, Venice, Prague, Paris and many others could equally well be chosen as examples of city building in which there is a certain civilised quality the value of which is everywhere recognised.

It is of no importance whether the men who gave these cities their particular quality were called architects or not, but it is important to remember that history has been illustrated through the past three thousand years by the cities men have built, and that the quality of our post-war building will be one of the means by which future generations will judge our civilisation.

(b) In Modern Planning.

Architects and Planners.

The words "Planning" and "Planners" have acquired in recent years a special sense for those who have been concerned with the Town Planning Acts and the schemes prepared under those Acts. This special sense of the word "Planning" consists in determining the uses of the various parts of the land comprised in the scheme. It is in this sense that the word "Planners" is used in Interim Report No. 4,* where the combination of the work of "Architects" and the work of "Planners" is discussed. The various ways in which the services of technical experts can best be used are described in detail in that report, the main principle being that in most schemes a number of different types of experts will be needed in the planning group whose final schemes must combine their joint wisdom.

Civic Planning.

A peculiarity of "Town Planning" so far carried out under the various Town Planning Acts is that it has hardly ever been concerned with towns, the difficulties—mainly financial—of dealing with built-up areas having confined schemes almost exclusively to rural and suburban areas. "Town Planning" having thus lost its original meaning, the phrase "Civic Planning" will be used here to denote the planning or replanning of towns and villages. In the post-war period Civic Planning can no longer be neglected. It will in fact become the most important element in planning schemes. This change will be due, as stated above : (1) to war damage, and (2) to the insistent public demand for better planning in our towns generally, whether damaged or not.

For those parts of planning schemes which do not deal with towns or villages, the first requisite is "planning" knowledge and experience in the sense defined in the paragraph entitled "Architects and Planners." But in Civic Planning, architectural knowledge and experience must come first, and it is essential in such work that the Architect should not be placed in a position subsidiary to the "Planner."

Civic Planning is primarily an architectural problem, the solution of which can produce order out of chaos with immense advantage both to pedestrian and wheeled traffic, and with fine architectural grouping at all main focal points. Plans which—among others—provide such solutions are the plan of inner London, now being prepared by the Royal Academy Planning Committee, and that of outer London, now being prepared by the London Regional Reconstruction Committee of the R.I.B.A.

To produce a fine town architectural imagination in the layout is as essential as architectural imagination in the design of the buildings.

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* *Reconstruction and the Architectural Profession.* Jnl. R.I.B.A., December, 1941, pp. 21-23. *The Builder,* January 2, 1942.

Modern examples of Civic Planning are all too few, but the Civic Centres of Southampton and Cardiff, and the residential areas at Bournville, Hampstead Garden Suburb, Welwyn and Wythenshawe, indicate what can be done when a competent architect has had control over the design of a large area of development.

On large sites it is usually best for a consulting architect to co-ordinate the work of a group of architects each in charge of a part. This policy has been adopted by a number of the Allied Societies of the R.I.B.A. in their preliminary work.

(c) In the Public Control of Appearance of Buildings.

The public control of appearance is frequently criticised as being an infringement of freedom; but the Committee believe it to be necessary under present conditions.

The simplest method of control would be a regulation requiring that the design of every building submitted for approval should be the work of an architect. This would effect a great improvement in design even in present circumstances; and, as no new admissions to the Register of Architects are possible without proper training and examination, the title "Architect" will become increasingly a protection to the public.

Until such a policy is adopted an alternative method of control which has already produced good results is the Panel System. Under this system, which might well be extended and given statutory authority, designs are submitted for the approval of the official architect who himself decides all straightforward cases, and submits the doubtful ones to the judgment of an advisory panel of architects.

For this purpose it is essential that every Planning Authority should employ a well-qualified architect as a principal officer directly responsible to his Authority. Two or more smaller Authorities could join together in appointing their official architect and share his services.

Just as the statutory appointment of Medical Officers of Health has been highly effective in raising our national standards in health and sanitation, so the statutory appointment of architects to Local Authorities would effectively raise our standards in housing, town-planning and in every type of civic design.

* * *

Finally, the Committee wish to emphasise the fact that the future grows out of the present. The character of post-war reconstruction will not be such as to satisfy our human needs automatically or as a result of vague desires. These needs can only be satisfied if the nation as a whole, and more particularly those most able to shape our policy, consider what it is that they are striving to make of England's green and pleasant land, and act through war and peace with the efficiency and vision which are needed to attain that end. This means, among other things, making the best use, now and in the future, of the nation's resources and talents, not excepting those of the Architect.

July, 1942.

COST-PLUS v. OTHER CONTRACTING METHODS

We have received the following letter on this subject from Mr. R. V. Boughton, A.I.Struct.E.:

ALTHOUGH the "Cost-plus" method has its weaknesses and channels for abuse, and is often condemned—more often than not by short-visioned persons—it certainly has, in my opinion, factors which over-rule those of other methods of contracting designed to protect certain interests in these abnormal times. What appears to be entirely overlooked by the designers of the "other contracting methods," such as "The Target," a form which is now superseded, "The M.O.W.P. Schedule," and other "on or off schedule methods" is that they require for their operation a small army of staffs on both the contractor's and the employer's sides as detailed below, staffs which, as I will endeavour to show, may be more usefully employed for the war effort, and staffs which cost a really appalling percentage of the cost of contracts.

THE CONTRACTOR'S STAFF includes directors, managers, estimating surveyors, quantity surveyors, measuring surveyors and their assistants, supervisors, accountants, clerks, typists, welfare officers, labour bonus calculators, many grades of which are spread between the contractor's chief office and the jobs.

THE EMPLOYER'S STAFF (quite apart from the necessary and usual architects, surveyors, quantity surveyors, and clerks of works) includes surveyors and assistants and accountants and their assistants, often resident on the job.

The result may be now examined logically and practically with long-distance wide-angled lenses. Firstly, the cost of these staffs is very considerable, varies with the nature of contract works, but is about 7½ per cent., is sometimes higher, and under the *cost-plus method* should be very much lower and not more than 2½ per cent. and often much less, as I explain a little later. This is a difference of about 5 per cent. and sometimes more expended in money in an effort, often partially abortive, to stop the "wicked" contractor "getting away with it"; this 5 per cent. may be represented by a great percentage of wasted staff man-power which could be devoted to much more useful duties, mostly of a civilian character. Secondly, the examination may be extended to practical happenings with a contract. Drawings, specifications and quantities (the latter being often approximate only) are provided for a contract. Circumstances and conditions arise which, to put it clearly, make it almost impossible to recognise and reconcile the original contract works with those actually executed; this very important aspect most definitely causes such confusion in the staff-armies aforesaid that elements arise which enforce a battle-ground for wits between the staffs of contractors and employers.

I must confess, as a contractor's surveyor with a very wide experience, that I lean most decidedly to the "cost-plus" method as being the most practical, economical and speedy of all methods of contracting under war-time conditions, subject to the following important observations and provisions:—

(1) It is realised that a contractor is usually a level-headed business man, not a philanthropist, who knows that he is much more liable to make a serious loss than any other party to a building contract; and, if he does make a good profit there is another Department more than willing to take his excess profits.

(2) That in addition to saving about 5 per cent. in the cost of the staffs mentioned previously, a contractor is usually more than willing to be assured of a certain small profit than a greater mythical one for which he must ensure his financial position by tendering at a higher estimated profit than if he had such assurance. This very often permits a saving of about 1½ per cent. to 2½ per cent.

(3) That the Government Departments concerned with urgent work of national importance consider the following methods as a sound and economical basis for the speedy construction of public works:

(*a*) The cost-plus method and the entire elimination of estimating, except that necessary to arrive at an approximate value of work, which estimating can be done by Government quantity surveyors; the entire elimination of all surveying work by contractors; and, only such surveying work by Government surveyors as is necessary to check work done by specialist or sub-contractors.

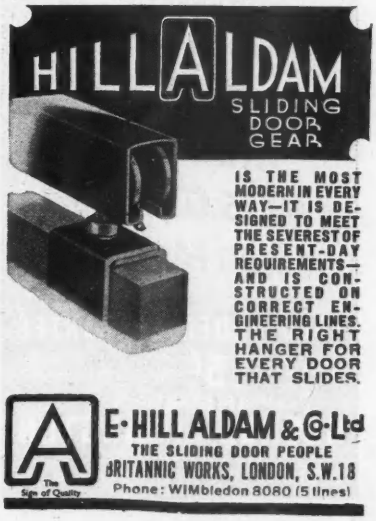
(*b*) The elimination of bills of quantities which will save a considerable amount in fees, etc., and the provision of other duties for quantity surveyors, who, by the way, are exceptionally scarce.

(*c*) The settlement of a definite sliding scale of clear profit for the contractor, which really can be as low as 1½ per cent. for large works and not exceeding 2½ per cent. for those of medium value; the settlement of a sliding scale of percentages for a contractor's head office staff and works staff; and a definition of what is to be included in such percentages and what items are to be charged as the cost of works on which the contractor's profit is based.

(*d*) The formation of a small resident staff representing the Government on jobs of great value, or the same and non-resident on small works; the duties of such staff to be supervisory, and to make decisions regarding progress, order and deviation of works, and to check accounts, issue certificates for interim payments to the contractor; to regulate the number of the contractor's staff, and other duties, all of which are subject to over-ruling by a higher authority on appeal by the contractor.

(*e*) The employment of a very limited resident staff by the contractor.

(*f*) The complete elimination of the present Government labour bonus scheme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now in operation on some jobs, which is generally cumbersome, impracticable, unworkable, and is so costly to operate that it would be cheaper to increase labour rates.

(g) Finally, it is my opinion that a properly planned, organised and controlled cost-plus method is not only the best, speediest and most economical under present-day conditions, but will inevitably come into force again, as it is difficult to believe that sane contractors can withstand any other method with the existing chaotic condition of supplies and labour. It is not so difficult to devise ways and means to share equitably among honourable contractors the vast amount of work now involved, and I am certain labour would fall very quickly into line as it always does if treated properly. Technical staff need not worry; there is ample work for them.

ECONOMY IN THE USE OF RUBBER

ECONOMY Memorandum (E.M.3) prepared by the Committee on Building Materials Standardisation, draws attention to the need for economy in the use of rubber, and recommends alternative materials. Departments are asked to ensure that those recommendations are followed on all works carried out or sponsored by them. The Memorandum is issued by Works and Buildings Committee.

Alternative materials.	*Remarks.*
FLOORING.—Plain brown linoleum.	In exceptional cases only.
STAIR TREADS.—Wood: Plain brown linoleum. **Stone or Cement:** Non-slip tiles or other rubber-free non-slip material available.	Alternatives suggested for repair work and also where suitable for new work. Only in exceptional cases should special coverings be used for treads and nosings on new work, but materials containing rubber prohibited.
STAIR TREAD NOSING. — Wood Stairs: Hardwood. **Stone or Concrete Stairs:** Any suitable rubber-free non-slip materials available.	
DOOR STOPS.—Wood or plastic.	Only to be fixed as a necessity and not as a convenience.
DRAUGHT EXCLUDER.—Felt or wood mouldings.	
CISTERN PULLS.—Plastic, hardwood, china or glass.	
PLUGS FOR LAVATORY BASINS, SINKS AND BATHS.—Brass.	"T" headed cock, beneath basin as an alternative to the supply of plugs generally.
WASHERS (TAP).—Leather or fibre.	
PLUMBERS' PACKING AND SEATING.—Red and white lead, asbestos or hemp as suitable.	
HOSE.—Canvas	In exceptional cases rubber hose of the braided or wrapped type may be used.
RUBBER GASKET.—"Hallite" or other similar material.	
STAMPING PADS.—Hard felt or cuttings from cork carpet.	
FLUSH PIPE JOINT TO W.C. PANS.—Canvas and oil mastic.	
ADHESIVES FOR FIXING LINOLEUM.—Hot pitch or casein glues.	Edges only of sheets to be fixed.
ACID RESISTING JOINTS TO DRAINS.—Suitable bituminous mastics.	

An Insurance Appointment.

The directors of the Federated Employers' Insurance Association, Ltd., announce the election of Mr. G. H. Parker, C.B.E., chairman and managing director of Messrs. George Parker and Sons., Ltd., of London, to the board of the Association.

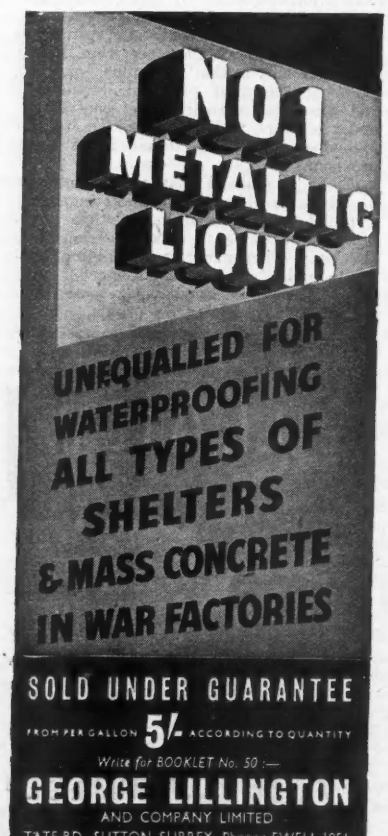
TIMBER ECONOMY

M.O.W.P. DESIGNS FOR INTERNAL FITMENTS.

DETAILED drawings showing timber-saving forms of construction for racks, shelving, bins, cupboards and fitments for war-time hospitals, canteens, hostels, post offices, dry stores, quarter-master stores, cloakrooms, trunk stores and factories, have been gathered together by the Ministry of Works and Planning and published in "Timber Economy, No. 3, Fitments," by H.M. Stationery Office, price 1s. net. These designs are another stage in the intensive study by the Ministry to secure economy in timber, and so of shipping space; they are being adopted forthwith in all Government work. Demand for timber far exceeds supply. Ships are not available to increase imports. Home production is working to capacity. It is estimated that if these economies are observed there will be a saving of between 30,000 and 50,000 standards per annum.

In general, the many ways in which the problem is being met fall under four heads: (1) By using other materials, produced in Britain or more readily available. These alternative materials may have to be varied according to availability of supplies; (2) by introducing more economical methods of using timber in joinery and carpentry; (3) by simplifying designs and lowering standards; and (4) by new methods of using plywood.

It is important to note that the use of wood sinks is prohibited except where special permission is obtained from the Directorate of Constructional Design, Ministry of Works and Planning. Wherever possible, white glazed or galvanised iron sinks must be used. The use of wood and metal supports for sinks is also prohibited, but there is no objection to the use of cantilever brackets already in stock, provided that no licence is issued for the replacement of the material.



IN PARLIAMENT

Building Materials.

COMMANDER LOCKER-LAMPSON asked the Minister of Health whether, in view of the shortage of building materials and the need for saving bricks, he would revive along the coast the rebuilding and building of houses with flints and stones which could be gathered for nothing upon the shore, and which had accumulated of late to the detriment of the amenities of a town, such as Cromer.

MR. BROWN said that considerations which his hon. friend mentioned were not the only, indeed not the main, reasons for a restriction on building at the present time but he would certainly consider his suggestion.

War Camouflage.

SIR JOHN GRAHAM KERR asked the Home Secretary if he was aware that the effectiveness of paint for the purposes of war camouflage was dependent upon the elimination of light and shade effects by countershading; and the breaking up of continuity of surface and outline by large masses of pigment contrasting strongly in tone such as white and mat-black; whether he was aware that objects of military importance were still being painted in complete disregard of these principles; and whether he would see that these principles were put into effect.

MR. H. MORRISON said he could assure his hon. friend that the principle of countershading to which he referred was well understood by those responsible for camouflage design in all Departments and was used by them wherever applicable. It was only one of the factors which must be considered in determining the most effective use of paint for camouflage purposes.

Utility Pottery.

MR. A. HOLLINS asked the Chancellor of the Exchequer whether he would consider the exemption of Utility pottery from the purchase tax which, when added to the maximum selling price, made the purchase of pottery practically prohibitive to the working-class people.

SIR K. WOOD said he regretted he could not accept his hon. friend's suggestion and he could not agree that the present controlled retail prices were prohibitive.

Westminster Technical Institute Classes.

Evening classes in structural drawing, mathematics and engineering drawing and science at the Westminster Technical Institute, Vincent-square, S.W.1, commence on August 31. Enrolment commences on that day and applications should be made to Dr. J. N. Long, D.Sc.

Fuel Saving Exhibition.

The Ministry of Fuel and Power have sponsored a Fuel Saving Exhibition, which was opened in the Exhibition Hall at Harrods, Ltd., Brompton-road, S.W.1, on Friday last, when Mr. Tom Smith, M.P., Joint Parliamentary Secretary to the Ministry of Fuel and Power, performed the opening ceremony.

Roofing Felt Control.

New regulations controlling the sale of roofing felts and dampcourses have been authorised by the Director of Roofing, M.O.W.P., who has intimated that a state of emergency exists necessitating their immediate adoption. Manufacturers and trade associations may obtain a copy of the regulations from the Roofing Felt Industry Executive Committee, Victoria House, Southampton-row, London, W.C.1.

CONTRACTS OPEN

For some contracts still open, but not included in this list, see previous issues. Those with an asterisk are advertised in this number. The dates at the head of paragraphs are those for the submission of tenders; a dagger (†) denotes closing date for applications; the name and address at the end refer to the person from whom particulars may be obtained.

BUILDING.

AUGUST 31.

Kingsclere and Whitchurch R.D.C.—Certain repair works to properties at Overton. S.

Leeds T.C.—Waterproofing concrete roofs of existing domestic surface shelters. R. A. H. Livett, (A.), Housing Director.

Rickmansworth U.D.C.—Erection of Nashcrete prefabricated building for British Restaurant at Croxley Green. S

SEPTEMBER 1.

Manchester T.C.—Alterations and adaptation of premises for N.F.S. City Architect. Dep. £2 2s.

Poole T.C. — Permanent repairs to houses. J. R. Barron, B.E.

Portstewart U.D.C.—Four surface shelters. Town S., Town Hall.

SEPTEMBER 2.

Colwyn Bay T.C.—Construction of premises at Ivy-st. B. E. and S.

†**East Riding C.C.**—(1) Erection of shelter at Longcroft Hall, Beverley; (2) Two sub-control and report centres. County Architect, County Hall, Beverley. Tenders by September 14.

SEPTEMBER 5.

Eccles T.C.—Building works at covered market. B. E. and S.

SEPTEMBER 7.

Belfast R.D.C. — Gas cleansing station and first-aid post. J. S. Munce (Munce and Kennedy), 24, Arthur-st., Belfast. Dep. £2.

Farnworth T.C.—Alterations and adaptations to premises for N.F.S. F. Ashton, B. E. and S.

PAINTING, ELECTRIC LIGHTING, HEATING, &c.

SEPTEMBER 2.

Belfast Commissioners for Tuberculosis Committee.—Painting work at Municipal hospital for children, Greenisland. City S. (Architectural Section, Room 92), City Hall.

SEPTEMBER 3.

Southborough U.D.C.—Internal decorations and repairs to 54 houses. S.

SEPTEMBER 9.

Limehurst R.D.C.—(1) Part internal decoration of Council offices; (2) external painting and decorating of 12 houses. A. Fisher, S., Council Offices, Oldham-rd., Waterloo, Ashton-under-Lyne.

ENGINEERING, IRON AND STEEL.

SEPTEMBER 7.

Staffs Potteries Water Board.—Construction of cast-iron and asbestos-cement water main. P. Wilkinson, E., Albion-st. Hanley. Dep. £5.

SEPTEMBER 17.

Huddersfield C.B.— Construction of two intakes and laying of approx. two miles of 24 in. C. I. pipes, one-sixth mile 18 in. reinforced concrete pipes, etc. J. P. Beveridge, Waterworks E., 24, Ramsden-st.

ROAD, SEWERAGE AND WATER WORKS.

SEPTEMBER 3.

Neston U.D.C.—Providing and laying of about 670 lin. yds. of 6-in. and 4-in. water main. Williams and Clarke, 5 and 6, Godstall-chbrs., Chester. Dep. £1 1s.

SEPTEMBER 7.

Colwyn Bay T.C. — Making-up South Back Conway-rd. B. E. and S.

Lisburn U.D.C.—Construction of additional sewage treatment works. M'Carthy and Lilburn, 47, Scottish Provident-bldgs., Belfast. Dep. £2 2s.

SEPTEMBER 14.

Wirral U.D.C.—Construction of approx. 173 lin. yds. of 9 in. dia. salt-glazed ware sewers together with manholes. S. Dep. £1 1s.

PUBLIC APPOINTMENTS.

AUGUST 31.

Monmouthshire C.C.—Assistant Architect. Vernon Lawrence, Clerk of Council, County Hall, Newport, Mon.

SEPTEMBER 3.

Aycliffe Home Office School.—(1) Senior Instructor for Building Construction; (2) Senior Instructor for Woodwork. John Gittins, Principal, Aycliffe Home Office School, nr. Darlington.

SEPTEMBER 7.

Manchester and District Regional Planning Committee.—(1) Temporary Senior Planning Assistant; (2) Temporary General Planning Assistant; (3) Temporary General Planning Assistant. R. H. Adcock, Hon. Clerk, Town Hall, Manchester.

SEPTEMBER 9.

***Derbyshire E.C.**—Permanent full-time Lecturer in Building Subjects. H. Kenneth Pickles, Clerk to the Governors, Technical College, Chesterfield.

Rush Building Job Completed.

COLONEL MCKEACHIE, General Purchasing Agent, U.S.A. Forces, and LORD PORTAL, Minister of Works and Planning, congratulated, on August 7, 300 men of the building industry on the completion in nine days of a rush building job for the American Army which was expected to take 42 days. The task was to convert two floors of a departmental store into offices for the American General Purchasing Board involving the erection of partitions, installation of lighting, heating, and telephone systems. The men worked continuously in twelve-hour shifts, pressing on with the job in the knowledge that this was a very urgent building operation.

War Damage Repairs.

Under Section 7 (2) of the War Damage Act, 1941, any person proposing to execute any works at all in the Row area of Great Yarmouth for the repair of war damage, other than temporary works, must first inform the W.D. Commission.

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A.R.P. SCHEMES

LONDON.

Acton.—T. B. Williams, Ltd., 82, Victoria-st., S.W.1, have secured contract, at £1,309, for erection of 18 static water-tanks on various sites.

Croydon.—E.C. recommend additional shelters at Coloma Secondary school, at £300, and additional shelters at St. Christopher's and St. Giles' schools, at £300 each.—E.C. recommend strengthening of 34 shelters at 12 schools, at £5,610.

PROVINCIAL.

Aberystwyth.—A.R.P. Committee propose water-storage tank and pumping apparatus at gas-cleansing station.

Billingham-on-Tees. — U.D.C. to strengthen shelters at Haverton Hill, at £330. Plans by J. H. Hill, S.

Bridgnorth.—T.C. propose conversion of building for emergency mortuary.

Heywood.—T.C. propose additions to fire station for N.F.S.

Middlesbrough.—A. Robinson (Contractors), Ltd., and Norman Thompson, Ltd. (both of Middlesbrough) secured contracts for strengthening of communal shelters, for T.C.—T.C. approved additional shelter at remand home, at £570.

Newark.—Notts C.C. propose shelter at Queen's-rd. depot.

Peterborough.—T.C. propose strengthening of interior of police station, at £270.

Rochdale.—C.B. placed contract with J. A. Mills & Sons, Wet Rake, Rochdale, for alterations at baths to form public cleansing station.

Southend-on-Sea.—B.C. placed contract with H. F. Walker, 49, Henry-dr., Leigh-on-Sea, at £1,020, for protected accommodation at central police station.—E. W. Farthing, "Dunromin," Midhurst-ave., Southend-on-Sea, secured contract, at £268, for construction of 60-person surface shelter.

Urmston. — U.D.C. propose canteen facilities at three public shelters.—U.D.C. approved estimates for adaptation of premises at Flixton for first-aid party post.—U.D.C. propose garages at first-aid party depot.

EMERGENCY INQUIRY BUREAU

Ground Rent on Demolished Leasehold House.

SIR,—*Is the owner of a leasehold house that has been completely demolished by bombing compelled to continue paying the ground rent for it?* LEASE.

A correspondent writes : The answer is in general, yes. The Landlord and Tenant (War Damage) Act, 1939, and the Landlord and Tenant (War Damage) (Amendment) Act, 1941, specially provides that a tenant may serve a notice of disclaimer *only* if allowed to do so by an Order of the Court.

Whether or not a tenant will be allowed to disclaim involves many considerations which are best dealt with by a lawyer.

The Court may, if it allows a disclaimer, impose conditions as to payment of compensation or otherwise. This is also very involved.

Designated Craftsman.

SIR,—*Does a "designated" craftsman under the Essential Works Order become entitled to bonus if put on to labourer's work, and if so, on what scale?* EMPLOYER.

Yes, but he will get only the bonus appropriate to the actual work he is doing; in this case the labourer's share. He will, however, get his ordinary wage rate as a craftsman, and it is understood that he will only be used as a labourer so long as there is no work available for him in his own trade.

RATES OF WAGES IN THE BUILDING TRADE

AS AND FROM 1st FEBRUARY, 1942

[Every endeavour is made to ensure accuracy, but we cannot be responsible for errors]

	Crafts-men.	Lab-ourers.		Crafts-men.	Lab-ourers.		Crafts-men.	Lab-ourers.		Crafts-men.	Lab-ourers.
Aberavon	1/11	1/6½	Clitheroe	1/11	1/6½	Isle of Thanet	1/9	1 4½	Saxmundham	1/7½	1/3½
Aberdare	1/11	1/6½	Cobham (Surrey)	1/10	1/5½	Isle of Wight	1/8½	1/4½	Scarborough	1/10½	1/5½
Abergavenny	1/11	1/6½	Colchester	1/10½	1/5½	Keighley	1/11	1/6½	Scunthorpe	1/11	1/6½
Abingdon	1/9½	1/5	Colwyn Bay	1/10	1/5½	Kenilworth	1/11	1/6½	Selby	1/11	1/6½
Accrington	1/11	1/6½	Congleton	1/10½	1/5½	Kettering	1/11	1/6½	Sevenoaks	1/9½	1/5
Aldeburgh	1/7½	1/3½	Coventry	1/11	1/6½	Kidderminster	1/10½	1/5½	Sheerness	1/9	1/4½
Aldershot	1/9½	1/5	Cranbrook	1/9	1/4½	King's Lynn	1/9	1/4½	Sheffield	1/11	1/6½
Alfreton	1/11	1/6½	Cranleigh	1/9	1/4½	Kirkham	1/11	1/6½	Shipley	1/11	1/6½
Alnwick	1/10½	1/5½	Crawley	1/9	1/4½	Knowle	1/10½	1/5½	Shoeburyness	1/10½	1/5½
Altrincham	1/11	1/6½	Crewe	1/10½	1/5½	Lancaster	1/11	1/6½	Shoreham	1/10	1/5½
Amble	1/10½	1/5½	Cromer	1/8	1/4	Leamington	1/11	1/6½	Shrewsbury	1/10½	1/5½
Amersham	1/9½	1/5	Crowborough	1/9	1/4½	Leatherhead	1/10	1/5½	Sittingbourne	1/9	1/4½
Ammanford	1/11	1/6½	Cuckfield	1/9	1/4½	Leeds	1/11	1/6½	Skegness	1/10	1/5½
Andover	1/9	1/4½	Darlington	1/11	1/6½	Leicester	1/11	1/6½	Sleaford	1/9½	1/5
Ardingly	1/9	1/4½	Darwen	1/11	1/6½	Leighton Buzzard	1/8	1/4	Slough	1/10	1/5½
Arundel	1/9	1/4½	Daventry	1/9½	1/5	Letchworth	1/10	1/5½	Southampton	1/10½	1/5½
Ascot	1/9	1/4½	Deal	1/9	1/4½	Lewes	1/9	1/4½	Southend-on-Sea	1/10½	1/5½
Ashby-de-la-Zouch	1/11	1/6½	Denbigh	1/10	1/5½	Lichfield	1/10	1/5½	Southport	1/11	1/6½
Ashford (Kent)	1/9	1/4½	Derby	1/11	1/6½	Lincoln	1/11	1/6½	South Shields	1/11	1/6½
Ashford (Middlesex)	1/11	1/6½	Devizes	1/8	1/4	Littlehampton	1/9	1/4½	Spalding	1/9	1/4½
Ashington	1/10½	1/5½	Dewsbury	1/11	1/6½	Liverpool	‡2/1	¶	Stafford	1/10½	1/5½
Ashtead	1/11	1/6½	Didcot	1/9	1/4½	Llandudno	1/10	1/5½	Staines	1/10	1/5½
Ashton-under-Lyne	1/9	1/6½	Diss	1/7½	1/3½	Llanelly	1/11	1/6½	Stamford	1/10	1/5½
Aylesbury	1/9	1/4½	Doncaster	1/11	1/6½	London—			Stevenage	1/10	1/5½
Aylsham	1/8	1/4	Dorchester	1/8½	1/4½	12m. radius	*2/0½	1/7½	Stockport	1/11	1/6½
Bagshot	1/9	1/4½	Dorking	1/9½	1/5	12-15m. radius	*2/0	1/7	Stockton-on-Tees	1/11	1/6½
Banbury	1/9	1/4½	Dover	1/9	1/4½	Long Eaton	1/11	1/6½	Stoke-on-Trent	1/11	1/6½
Barnsley	1/11	1/6½	Dovercourt	1/9	1/4½	Longton	1/11	1/6½	Stourbridge	1/11	1/6½
Barnstaple	1/9	1/4½	Driffield	1/9½	1/5	Loughborough	1/11	1/6½	Stourport	1/10½	1/5½
Barrow-in-Furness	1/11	1/6½	Droitwich	1/10½	1/5½	Louth	1/9½	1/5	Stowmarket	1/8	1/4
Barry	1/11	1/6½	Dudley	1/11	1/6½	Lowestoft	1/9	1/4½	Stratford-on-Avon	1/10	1/5½
Basingstoke	1/9	1/4½	Dunstable	1/9½	1/5	Luton	1/10½	1/5½	Stroud	1/10	1/5½
Bath	1/10½	1/5½	Durham City	1/11	1/6½	Macclesfield	1/10½	1/5½	Sunderland	1/11	1/6½
Batley	1/11	1/6½	Eastbourne	1/10	1/5½	Maidenhead	1/10	1/5½	Sutton Coldfield	1/11	1/6½
Beaconsfield	1/9½	1/5	E. Glam. (Mon. Val.)	1/11	1/6½	Maidstone	1/9½	1/5	Swaffham	1/7½	1/3½
Beccles	1/7½	1/3½	East Grinstead	1/9	1/4½	Malvern	1/9½	1/5	Swanage	1/9	1/4½
Bedford	1/10½	1/5½	Edenbridge	1/9	1/4½	Manchester	1/11	1/6½	Swansea	1/11	1/6½
Berkhamsted	1/9	1/4½	Ely	1/8	1/4	Manningtree	1/8	1/4	Swindon	1/9½	1/5
Berwick	1/10½	1/5½	Epping	1/11	1/6½	Mansfield	1/11	1/6½	Tamworth	1/10½	1/5½
Beverley	1/11	1/6½	Exeter	1/10½	1/5½	March	1/8	1/4	Taunton	1/9½	1/5
Bexhill-on-Sea	1/9½	1/5	Exmouth	1/9½	1/5	Margate	1/9	1/4½	Tenterden	1/9	1/4½
Bideford	1/9	1/4½	Fakenham	1/8	1/4	Market Harborough	1/10	1/5½	Thames Haven	1/11	1/6½
Biggleswade	1/9	1/4½	Falmouth	1/9½	1/5	Matlock	1/9½	1/5	Thetford	1/8½	1/4½
Billericay	1/8½	1/4½	Fareham	1/10	1/5½	Melton Constable	1/7½	1/3½	Thorpe Bay	1/10½	1/5½
Birchington	1/9	1/4½	Faversham	1/9	1/4½	Melton Mowbray	1/10	1/5½	Todmorden	1/11	1/6½
Birkenhead	‡2/1	¶	Felixstowe	1/10	1/5½	Merthyr	1/11	1/6½	Tonbridge	1/9½	1/5
Birmingham	†1/11	1/6½	Filey	1/9½	1/5	Middlesbrough	1/11	1/6½	Torquay	1/10½	1/5½
Bishop Auckland	1/11	1/6½	Fleetwood	1/11	1/6½	Middleton	1/11	1/6½	Totnes	1/9	1/4½
Bishop's Stortford	1/10	1/5½	Flint	1/11	1/6½	Middlewich	1/10½	1/5½	Trowbridge	1/8	1/4
Blackburn	1/11	1/6½	Folkestone	1/9	1/4½	Milford Haven	1/9½	1/5	Truro	1/8½	1/4½
Blackpool	1/11	1/6½	Frinton-on-Sea	1/9	1/4½	Morecambe	1/11	1/6½	Tunbridge Wells	1/9½	1/5
Blyth	1/11	1/6½	Frome	1/8	1/4	Morley	1/11	1/6½	Uppingham	1/10½	1/5½
Bognor Regis	1/9	1/4½	Gainsborough	1/10	1/5½	Mundesley	1/8	1/4	Uttoxeter	1/10	1/5½
Bolton	1/11	1/6½	Gateshead	1/11	1/6½	Nantwich	1/10½	1/5½	Wakefield	1/11	1/6½
Bournemouth	1/10	1/5½	Gillingham (Kent)	1/10	1/5½	Nelson	1/11	1/6½	Walsall	1/11	1/6½
Bracknell	1/9	1/4½	Glossop	1/11	1/6½	Newark-on-Trent	1/10½	1/5½	Walsden	1/11	1/6½
Bradford	1/11	1/6½	Gloucester	1/10½	1/5½	Newbury	1/9	1/4½	Walton-on-Naze	1/9	1/4½
Bradford-on-Avon	1/8	1/4	Godalming	1/9	1/4½	Newcastle-on-Tyne	1/11	1/6½	Ware	1/10½	1/5½
Braintree	1/9	1/4½	Goole	1/11	1/6½	Newcastle-u.-Lyme	1/11	1/6½	Warminster	1/8	1/4
Brentwood	1/10½	1/5½	Gosport	1/10½	1/5½	New Forest	1/9	1/4½	Warrington	1/11	1/6½
Bridgwater	1/9½	1/5	Grantham	1/10	1/5½	Newmarket	1/9	1/4½	Warwick	1/11	1/6½
Bridlington	1/10½	1/5½	Gravesend	1/10½	1/5½	Newport, Mon.	1/11	1/6½	Wellington R.D.	1/10½	1/5½
Brighouse	1/11	1/6½	Great Yarmouth	1/9	1/4½	Newport Pagnell	1/9	1/4½	Welwyn	1/10	1/5½
Brighton	1/10	1/5½	Grimsby	1/11	1/6½	Northampton	1/11	1/6½	Welwyn Gar. City	1/11	1/6½
Bristol	1/11	1/6½	Guildford	1/9	1/4½	Norwich	1/11	1/6½	Wells (Norfolk)	1/7½	1/3½
Broadstairs	1/9	1/4½	Guisborough	1/9½	1/5	Nottingham	1/11	1/6½	West Bromwich	1/11	1/6½
Bromsgrove	1/10½	1/5½	Halifax	1/11	1/6½	Nuneaton	1/11	1/6½	Westcliff-on-Sea	1/10½	1/5½
Buckley	1/11	1/6½	Hanley	1/11	1/6½	Oakham	1/9½	1/5	Weston-super-Mare	1/10	1/5½
Bungay	1/7	1/3½	Harpenden	1/10	1/5½	Oldham	1/11	1/6½	Weybridge	1/10	1/5½
Burnham-on-Crouch	1/7½	1/3½	Harrogate	1/11	1/6½	Ormskirk	1/11	1/6½	Weymouth	1/9	1/4½
Burnley	1/11	1/6½	Hartlepools	1/11	1/6½	Oxford	1/10½	1/5½	Whitby	1/10	1/5½
Burslem	1/11	1/6½	Harwich	1/9	1/4½	Oxted	1/9½	1/5	Whitstable	1/9	1/4½
Burton-on-Trent	1/11	1/6½	Haslemere	1/9	1/4½	Paignton	1/10½	1/5½	Widnes	1/11	1/6½
Bury	1/11	1/6½	Hastings	1/9	1/4½	Peterborough	1/10½	1/5½	Wigan	1/11	1/6½
Bury St. Edmunds	1/8½	1/4½	Hatfield	1/10½	1/5½	Plymouth	1/11	1/6½	Wigton	1/9½	1/5
Buxton	1/10½	1/5½	Haywards Heath	1/9	1/4½	Pontefract	1/11	1/6½	Willington	1/11	1/6½
Byfleet	1/9½	1/5	Hednesford	1/10½	1/5½	Pontypridd	1/11	1/6½	Wilmslow	1/11	1/6½
Cambridge	1/11	1/6½	Hemel Hempstead	1/10	1/5½	Port Talbot	1/11	1/6½	Winchester	1/9½	1/5
Canterbury	1/9	1/4½	Henley-on-Thames	1/9	1/4½	Portsmouth	1/10½	1/5½	Windermere	1/9½	1/5
Cardiff	1/11	1/6½	Hereford	1/9	1/4½	Preston	1/11	1/6½	Windsor	1/10	1/5½
Carlisle	1/11	1/6½	Herne Bay	1/9	1/4½	Pulborough	1/9	1/4½	Wisbech	1/8½	1/4½
Carnforth	1/11	1/6½	Hertford	1/10½	1/5½	Ramsgate	1/9	1/4½	Witham	1/9	1/4½
Castleford	1/11	1/6½	Heysham	1/11	1/6½	Reading	1/10½	1/5½	Woking	1/9½	1/5
Caterham	1/11	1/6½	Hitchin	1/10	1/5½	Redditch	1/10½	1/5½	Wokingham	1/9	1/4½
Chard	1/8	1/4	Hoddesdon	1/10½	1/5½	Redhill	1/9½	1/5	Wolverhampton	1/11	1/6½
Chatham	1/10	1/5½	Holt (Norfolk)	1/7½	1/3½	Ripon	1/9½	1/5	Woodbridge	1/8½	1/4½
Chelmsford	1/10½	1/5½	Horley	1/9	1/4½	Rochdale	1/11	1/6½	Worcester	1/10½	1/5½
Cheltenham	1/10	1/5½	Horsham	1/9	1/4½	Rochester	1/10	1/5½	Workington	1/9½	1/5
Chepstow	1/10½	1/5½	Horwich	1/11	1/6½	Rugby	1/11	1/6½	Worksop	1/10½	1/5½
Chertsey	1/10	1/5½	Huddersfield	1/11	1/6½	St. Albans	1/10½	1/5½	Worthing	1/9	1/4½
Chester	1/11	1/6½	Hull	1/11	1/6½	St. Helens	1/11	1/6½	Wrexham	1/10½	1/5½
Chesterfield	1/11	1/6½	Hunstanton	1/8	1/4	St. Neots	1/8½	1/4½	Wroxham	1/8½	1/4½
Chichester	1/9	1/4½	Huntingdon	1/8½	1/4½	Saffron Walden	1/8	1/4	Wycombe	1/10	1/5½
Chorley	1/11	1/6½	Ilfracombe	1/9	1/4½	Salisbury City	1/8½	1/4½	Wymondham	1/8	1/4
Cirencester	1/8½	1/4½	Ingatestone	1/9½	1/5	Salisbury Plain	1/10	1/5½	Yeovil	1/9½	1/5
Clacton	1/9	1/4½	Ipswich	1/10½	1/5½	Sawbridgeworth	1/9½	1/5	York	1/11	1/ 6½
Cleveleys	1/11	1/6½									

* Painters ½d. less than other Craftsmen. † Plus 2d. per working day. ‡ Plasterers 2/1½.

¶ Tradesman's Labourers, 1/7½. Navvies and General Labourers, 1/6½.

§ Joiners, Plumbers, Bricklayers, Tilers and Masons receive 2/- per week or 4d. per day Tool Money.

NOTE.—Carpenters and Joiners in all Towns and Districts (other than Birkenhead and Liverpool) receive 2d. per day Tool Allowance.

For Building Trade Wages in Scotland, see page 188

PRICES CURRENT OF MATERIALS*

Note: Owing to the exceptional circumstances which prevail at the present time, prices of materials should be confirmed by inquiry. The prices of soft woods are for cash on delivery. At present linseed oil and genuine spirits of turpentine can only be supplied in cans in small quantities.

BRICKS, &c.

	£ s. d.
First Hard Stocks	4 13 0
Second Hard Stocks	4 6 0
Mild Stocks	3 13 0
Single Rough Stocks	3 7 0
Common Stocks	2 17 6

All loaded free into lorry at the works. The question of haulage is still very difficult and prices must be obtained from job to job. *In addition*, there will be the Levy under the Bricks (Charges) Order, 1942, of 3s. per 1,000.

2½ in. Phorpres. A discount of 6d. 1,000 only monthly account.	King's Cross Station per 1,000 s. d.	To sites in W.C. District per 1,000 s. d.
Pressed	56 9	63 3
Keyed	58 9	65 3
Single Bullnose	76 9	83 3
Rustics	76 9	83 3
Whites	77 3	83 3

	£ s. d.
White Midhurst best selected (delivered London site)	5 10 0
Best blue Pressed Staffs. (London Stns.)	11 12 0
Do. Bullnose (London Stns.)	12 2 0
Blue Wire Cuts (London Stns.)	10 9 6

Best Stourbridge Fire Brick (London Stns.) :—

£ s. d.		£ s. d.
2½ in. 10 0 0	3 in.	12 0 0

GLAZED BRICKS. (London Stns.)

Best White Ivory and Salt Glazed Stretcher 28 0 0	D'ble Str'tch'rs D'ble Headers One side&two ends	36 10 0 33 10 0 37 10 0
Headers 27 10 0	Two sides&one end	38 10 0
Quoins, Bullnose and 4½ in. Flats 34 10 0	Splays and Squints	36 0 0

Second Quality, £2 per 1,000 less than best. Cream and buff, £2 extra over white. Other colours. Hard Glaze. £5 10s. extra over white.

ADD LEVY ON BRICKS. 3/- per 1,000 except Glazed Bricks.

PARTITION SLABS.

Delivered on site London Area.

"PHORPRES" HOLLOW PARTITION BLOCKS.

	s. d.		s. d.
2" per yd. sup.	2 8	3" per yd. sup. ..	3 6
2½ " "	2 11	4" " " ..	3 10

CLINKER CONCRETE.

2" per yd. sup.	1 11	3" per yd. sup. ..	2 6
2½ " "	2 3	4" " " ..	3 6

CRANHAM TERRA COTTA.

Size 12 x 9 x 2" per yd. super	2 8
Size 12 x 9 x 2½ " "	2 11
Size 12 x 9 x 3" " "	3 6
Size 12 x 9 x 4" " "	3 10

HEMPSTEAD—KEYED TWO SIDES.

12" x 9" x 2"	2 8	12" x 9" x 3"	3 6
12" x 9" x 2½"	2 11	12" x 9" x 4"	3 10

Per yard super d/d. Free on site, London.

Plus 2d. for smooth one side, and 4d. for smooth both sides.

STONE.

	s. d.
BATH STONE.—Delivered in railway trucks at Westbourne Park, Paddington, G.W.R., or South Lambeth, G.W.R., per ft. cube	3 3½
BEER STONE—RANDOM BLOCK— Free on rail at Seaton Station.. per ft cube	2 3
Delivered free on rail Nine Elms, S.R. "	3 1½
Selected approximate size one way, 1d. per cubic ft. extra, selected approximately three sizes or for special work, 3d. per cubic ft. extra.	
PORTLAND STONE— Brown Whitbed, in random blocks of 20 ft. average, delivered in railway trucks at Nine Elms, S. Rly., South Lambeth Station, G.W.R., and Westbourne Park, Paddington, G.W.R., ...per ft. cube	/4 7
Do. do. delivered on road waggons as above stations .....per ft. cub.	4 7
White basebed, 3d. per ft. cube extra.	
NOTE.—1d. per ft. cube extra for every ft. over 20 ft. *average* and ½d. beyond 30 ft.	
HOPTON-WOOD STONE— F.O.R. Quarries, Wirksworth, Derbyshire, Random blocks from 10 ft. and over P.ft.cb.	s. d. 13 2
Sawn two sides	26 11
Sawn three or four sides	31 11
YORK STONE, BLUE—*Robin Hood Quality.* Delivered at any Goods Station, London.	
6 in. sawn two sides landings to sizes (under 30 ft. super) .....per ft. super	5 6
6 in. rubbed two sides, ditto .... "	6 3
3 in. sawn two sides slabs (random sizes) ..... "	2 7
2 in. to 2½ in. sawn one side slabs (random sizes) (paving) ..... "	1 8½
1¼ in. to 2 in. ditto ..... "	1 4½
HARD YORK— Delivered at any Goods Station, London.	
Scrappled random blocks .....per ft. cube	6 10
6 in. sawn two sides landings to sizes (under 40 ft. super) .....per ft.super	5 7½
6 in. rubbed two sides, ditto .... "	6 9
4 in. sawn two sides slabs (random sizes) ..... "	3 5
2 in. ditto ditto ..... "	2 8
2 in. self-faced random flags.....per yd. super	8 9

CAST STONE.

Delivered in London area in full van loads, per ft. cube: Plain, 7s. 6d. Moulded, 8s. 6d. Small section cills and copings, 11s.

SAND.

Thames Ballast	10s. 0d. per yd.	delivered 2 miles radius Paddington.
Pit Ballast	9s. 6d. " "	
Pit Sand	12s. 0d. " "	
Washed Sand	13s. 0d. " "	
¼ in. Shingle	10s. 6d. " "	
¼ in. Broken Brick	16s. 0d. " "	
Pan Breeze	10s. 0d. " "	

CEMENT.

Best British Portland Cement. Standard Specification.

delivered London Area.	£ s. d.
6 ton loads and upwards site ..... per ton	2 9 6
1 ton to 6 tons site	2 12 6
Alongside Vauxhall in 80 ton lots	2 7 0
"Ferrocrete" Rapid Hardening Cement—	
6 ton loads and upwards site	2 15 6
1 ton to 6 tons site	2 18 6
Alongside Vauxhall in 80 ton lots	2 13 0
"Aquacrete" Water Repellent, "Blue Circle" cement, 30s. per ton extra on ordinary "Blue Circle" prices.	
"Colorcrete" Nos. 1 and 2. Coloured Rapid Hardening Portland Cement, in 6-ton lots ..	4 9 6
"Colorcrete" not rapid hardening, according to colour, from £7 to £15 10s. per ton.	
"Snowcrete" White Portland Cement 10	5 0
"417" Cement (Ultra Rapid Hardening) Delivered site London Area in 6 ton lots and upwards ..... per ton	3 9 6

Plus packages at current prices.

Super Cement (Waterproof), *bags extra* 3 19 6

NOTE.—Jute sacks charged at 35s. 6d. nett per ton (20 sacks) for quantities of or exceeding one ton.

Less than one ton 1s. 9½d. nett each.

Credit 1s. 6d. nett each when returned in good condition within two weeks.

	£ s. d.		£ s. d.
Roman cement	8 10 0	Keene's Cement, White	7 0 0
Parian Cement	7 0 0	" " Pink	6 10 0

Cementone Colours for cement according to tints per cwt. from £3 5s. 0d.

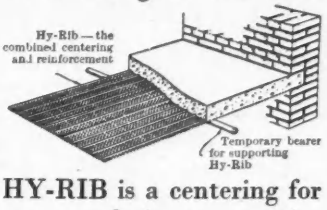
SLATES.

First quality slates from Penrhyn or Portmadoc carriage paid in full truck loads to London Rate Station Per 1,000 actual.

	£ s. d.		£ s. d.
24 by 12	45 5 0	18 by 10	24 0 0
22 by 12	37 17 6	18 by 9	22 12 6
22 by 11	34 2 6	16 by 10	21 10 0
20 by 12	33 0 0	16 by 8	16 12 6
20 by 10	30 5 0		

HY-RIB is the answer to your centering problem

Use the reinforcing steel as centering for the slabs



HY-RIB is a centering for concrete during construction

HY-RIB is a reinforcement for the structural slab

Over ***11,000,000*** *square feet of HY-RIB combined centering and reinforcement has been used in wartime buildings*

For the guidance of Constructional Staffs we provide working drawings for particular applications of Hy-Rib.

HY-RIB
COMBINED CENTERING AND REINFORCEMENT

HY-RIB SALES, 6 COLLINGHAM GARDENS EARLS COURT, S.W.5. 'PHONE: FROBISHER 8141

4-5264

PLASTER.

	£ s. d.		£ s. d.
Coarse, Pink	4 0 0	Sirapite, Coarse..	4 5 6
" White ..	4 7 6	" Finish ..	4 13 6
Pioneer	4 5 0		

Above prices for 4-ton loads and over London Area.

Best Ground Blue Lias Lime	3 7 6	Grey Stone Lime Chalk Lime	2 17 6 2 17 6
Granite Chippings	1 15 0	Hair per cwt. ..	3 5 0

NOTE.—Sacks are charged 1s. 9d. each, and credited 1s. 6d. if returned in good condition within three months, carriage paid.

Stourbridge Fireclay in paper bags, £2 12s. 6d. in 6-ton lots at railway depot.

TILES.

Delivered at London rate stations in full truck loads of not less than 6 tons..... Per 1,000 f.o.r. London.

Best machine-made tiles from Broseley or Staffordshire district	£5 15 0
Ditto hand-made ditto	6 18 6
Ornamental ditto	7 5 0
Hip and valley tiles (per dozen) { Hand-made ..... / Machine-made	0 14 0 / 0 13 6

HARD WOOD.

1 INCH AND UP THICK.

Average price for prime quality. Foot cube.

	s. d.		£ s. d.
Dry English Wainscot Billets..	16 0	to	0 18 0
Dry Slavonian Billet Wainscot ..	17 0	to	1 0 0
Dry Cuba Mahogany logs	21 0	to	1 4 0
Square-edged Honduras Mahogany			0 16 6
Log Cut Honduras Mahogany			0 17 6
American Figured Oak			0 13 0
American Plain Oak			0 12 6
Jap. Figured Oak			0 13 0
Jap. Plain Oak			0 12 6
Teak			0 15 6
American Whitewood			0 12 6
African Whitewood			0 8 0
African Mahogany			0 11 0
Australian Walnut			0 19 0
Australian Silky Oak			0 12 6
Best Scotch glue ..... per cwt.			5 0 0
Liquid glue .....per gallon			1 2 0

SOFT WOOD.

	Minimum. £ s. d.	Maximum. £ s. d.
Scantlings in imported sizes, 2 in. by 3 in. to 4 in. by 11 in.	43 10 0	53 0 0

(MERCHANTABLE BRITISH COLUMBIAN PINE)

PLANED BOARDS.

PRIME CLEAR BRITISH COLUMBIAN PINE.

	Per standard. £ s. d.
1 in. by 11 in. } 1 in. by 9 in. }	67 10 0

	Per square s. d.
1 in. plain edge flooring	53 0
1½ in. ditto	66 6
1 in. tongued and grooved	53 0
1¼ in. ditto	66 6

MATCHING.

	Per square s. d.
⅜ in.	37 6
½ in.	42 0
1 in.	55 0

PLUMBERS' BRASS WORK.

Delivered in London.

M.O.H.

S.D. BIB COCKS, CRUTCH HEAD, FOR IRON

½ in.	¾-in.
30/-	44/6 per doz.

TOILET BIB COCKS FOR IRON.

½ in.	¾ in.
42/-	60/- per doz

S.D. STOP COCKS FOR IRON.

¼ in.	⅜ in.	½ in.	¾ in.	1 in.	1¼ in.	2 in.
29/6	45/-	81/6	195/-	272/-	453/-	per doz

S.D.S. COCKS WITH TWO UNIONS FOR LEAD.

¼ in.	⅜ in.	½ in.	¾ in.	1 in.	1¼ in.	2 in.
45/-	77/6	123/-	240/-	372/-	624/-	per doz

DOUBLE NUT BOILER SCREWS.

¼ in.	⅜ in.	½ in.	¾ in.	1 in.	1¼ in.	2 in.
5/6	6/8	11/-	24/-	36/-	56/-	per doz

HEAVY CROYDON BALL VALVES.

¼ in.	⅜ in.	½ in.	¾ in.	1 in.	1¼ in.	1½ in.
36/-	65/-	98/-	195/-	264/-	per doz.	

CAPS AND SCREWS.

¼ in.	½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.	3 in.	3½ in.	4 in.
11/9	14/5	21/6	37/9	54/-	59/6	per doz			

BRASS SLEEVES.

¼ in.	½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.	3 in.	3½ in.	4 in.
10/9	13/6	25/-	37/-	46/-	per doz.				

LEAD TRAPS WITH BRASS CLEANING SCREWS

	1¼×6 lbs.	1½×6 lbs.	2×7 lbs.	3×7 lbs.
Lead P.	26/-	34/-	55/-	92/- per doz.
Lead S.	34/-	41/-	67/	115/- per doz.

SOLDER.—Plumbers', 1/5; Tinmen's, 1/9. Blow pipe 2/- per lb.

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* The information given on this page has been specially compiled for THE BUILDER, and is copyright. The aim in this list is to give, as far as possible, the *average* prices of materials, no necessarily the highest or lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information. Prices are subject to 2½ per cent. cash discount.

PRICES CURRENT OF MATERIALS—(contd.)

METALS.

JOISTS, GIRDERS, &c., TO LONDON STATION PER TON—

	£ s. d.
R.S. Joists, cut and fitted	£23 10 0
Plain Compound Girders	26 0 0
Stanchions	28 10 0
In Roof Work	33 10 0

NOTE.—These prices are for standard pieces and not special pieces of an awkward nature.

MILD STEEL ROUNDS.—To London Stations, per ton.

Diameter.	£ s. d.	Diameter.	£ s. d.
¼ in.	23 0 0	⅝ in. to ¾ in.	21 10 0
½ in.	22 0 0	⅞ in. to 2½ in.	21 0 0

WROUGHT TUBES AND FITTINGS.

Deliveries from works.

Deliveries from London stock further 2½ % gross.

10/17

	Tubes. ½"/6" %	Tubulars. ¾"/6" %	and 19/24 %	Flanges. ½"/2" %	¾"/6" %
Light weight ..	51½	—	47½	51	57½
Heavy weight	44	44	39½	41	49½
Galv.lightweight	40½	—	38½	39½	48½
Galv.heavyweight	31	31	31	29½	41

Tubes and tubulars sizes ½"/⅞" inclusive, charged extra of 5% less gross.

Fittings. Figs. 25/34 5% less gross discount.

Terms.—Nett cash end of month following date of invoice. Carriage paid on lots of £10 nett value and over.

C.I. HALF-ROUND GUTTERS—London Prices ex Works. per yd. in 6 ft. lengths.

	Gutters.	Nozzles.	Stop ends.
3 in.	1/5½	1/2½	4½d.
3½ in.	1/7	1/4	4½d.
4 in.	1/7	1/6	6½d.
4½ in.	1/8½	1/8½	7½d.
5 in.	2/0½	2/0	9d.

O.C. GUTTERS.

3 in.	1/10½	1/7½	5d.
3½ in.	2/1½	1/7½	6½d.
4 in.	2/1½	1/8½	7½d.
4½ in.	2/2½	1/11½	8½d.
5 in.	2/8½	2/3	10½d.

RAIN WATER PIPES.

Per yd. in 6 fts.	Pipe	Bends. Stock angles.	Branches.
2 in.	2/2½	1/5½	2/2
2½ in.	2/3½	1/8½	2/7½
3 in.	2/8½	2/1½	3/2
3½ in.	3/2½	2/6½	3/7½
4 in.	3/8½	3/0½	4/5

NETT PRICES.

Tonnage allowance—4-ton lots, 5 per cent.
2-ton lots, 2½ per cent.

L.C.C. COATED SOIL PIPES—London Prices, ex Stock.

Per yd. in 6 fts.	Pipe.	Bends.	Branches.
2 in.	3/9½	2/7½	3/2
2½ in.	4/5	2/10½	3/11½
3 in.	4/9	3/2	4/8½
3½ in.	4/10½	3/11½	5/5½
4 in.	5/3½	4/5	6/3½

L.C.C. COATED DRAIN PIPE.

	Pipe.	Bends.	Branches.
3 in. per yd. in 9 fts.	5/5	6/3	9/11
cwt. qr. lbs.			
4 in. 1 1 20	7/11	7/1	12/5
5 in. 1 2 22	9/7	12/9	19/3
6 in. 2 0 6	11/5	14/8	25/6

Gaskin, 75/- per cwt.

	Per ton basis in London. £ s. d.
IRON.—Staffordshire Crown, Merchant quality	18 7 6
IRON.—Staffordshire Marked Bars	19 7 6
Mild Steel Bars	19 15 0
Mild Steel Hoops	21 10 0
	Ex Merchant's Stock, per ton (two-ton lots).
Soft Steel Sheets, C.R. and C.A.—	
20 gauge	24 17 6
24 gauge	25 2 6
26 gauge	25 17 6
Galvanised Corrugated Sheets, 6 ft. to 9 ft.	
20 gauge	27 0 0
24 gauge	27 10 0
26 gauge	28 15 0
Galvanised Flat Sheets, C.R. and C.A.—	
20 gauge	28 10 0
24 gauge	29 0 0
26 gauge	30 5 0
	Per ton. £ s. d.
Cut Nails, 3 in. and up	28 10 0

ALL NETT.

METAL WINDOWS.—Standard sizes, suitable for complete houses, including all fittings, painting two coats, and delivery to job, average price about 2s. 4d. to 2s. 7d. per foot super.

PAINTS, &c.

	£ s. d.
Raw Linseed Oil (5 galls.) .. per gallon	0 5 9
Boiled Linseed Oil (5 galls.) .. ,,	0 6 0
Genuine Ground English White Lead, per cwt.	3 10 3
Genuine White Lead Paint, 14 lb. tins free, per cwt.	4 14 0
Genuine Red Lead, .. ,,	2 17 0
Linseed Oil Putty .. ,,	1 11 3
Size. XD quality .. fkn.	0 4 9

Turpentine substitute can be obtained and prices vary according to quality from 3/5 gallon upwards.

	£ s. d.
SNOWCEM CEMENT PAINT .. per cwt.	2 16 0
C.M.C. CAMOUFLAGE PAINT .. ,,	2 16 0

BUILDING TRADE WAGES IN SCOTLAND

Following are grade rates authorised by the Scottish N.J.C. from February 1. Every endeavour is made to ensure accuracy, but we cannot be responsible for errors that may occur.

Grade Classification	A	A1	A2	A3	B	B1
Craftsmen	1/11½	1/11	1/10½	1/10	1/9½	1/9
Labourers	1/6	1/5½	1/5½	1/5	1/4½	1/4½
Aberdeen	A	Dumfriesshire	A2	Inverness	*	Perthshire	A2
Ayrshire	A	Dundee	A	Inverurie	A1	Peterhead	A1
Banff	B	Dunoon	A	Kincardineshire	A2	Renfrewshire	A
Berwickshire	A2	East Fife	A	Kinross-shire	A	Rothesay	A
Bridge of Allan	A	East Lothian	A	Lanarkshire	A	Roxburghshire	A2
Broughty Ferry	A	Edinburgh	A	Midlothian	A	St. Andrews	A
Clackmannanshire	A	Fifeshire	A	Monifieth	A	Selkirkshire	A2
Doune	A	Forfarshire	A2	Moray and Nairn	B	Stewartry	A2
Dunblane	A	Glasgow	A	Newport	A	Stirlingshire	A
Dumbartonshire	A	Greenock	A	Peeblesshire	A2	Stornoway	A2
Dumfries	A1	Hamilton	A	Perth	A	Tayport	A
						West Lothian	A

*This town has its own rates: Masons, 1/8½; Carpenters, 1/8½; Slaters, 1/8½; Plumbers, 1/9; Plasterers, 1/9½, but 1/10 is paid owing to the scarcity at present; Painters, 1/8½ and Labourers, 1/4

The information given in this table is copyright. Rates of wages in England and Wales are given on page 186

VARNISHES, &c.

		Per gallon. £ s. d.
Oak Varnish	Outside	0 16 0
Fine do.	,,	0 18 0
Fine Copal	,,	1 0 0
Pale Copal	,,	1 2 0
Pale Opal Carriage	,,	1 6 0
Best do. do.	,,	1 14 0
Floor Varnish	Inside	1 0 0
Fine Pale Paper	,,	1 0 0
Fine Copal Cabinet	,,	1 4 0
Fine Copal Flatting	,,	1 2 0
Hard Drying Oak	,,	1 0 0
Fine Hard Drying Oak	,,	1 1 6
Fine Copal Varnish	,,	1 2 6
Pale do.	,,	1 14 0
Best do.	,,	1 4 6
Best Japan Gold Size	,,	1 14 6
Best Black Japan		0 12 0
Oak and Mahogany Stain (water)		0 14 0
Brunswick Black		0 9 6
Berlin Black		0 16 0
Knotting (patent)		0 17 0
French and Brush Polish		0 14 0
Liquid Dryers in Terebene		0 11 0
Cuirass Black Enamel		0 9 0

LEAD, &c.

(Delivered in London.)	Per ton. £ s. d.
LEAD.—Sheet, English, 4 lb. and up	38 0 0
Pipe in coils	38 10 0
Soil pipe	42 10 0
Compo pipe	47 10 0

NOTE.—Country delivery, 20/- per ton extra, lots under 3 cwt. 4/- per cwt. extra and over 3 cwt. and under 5 cwt., 2/6 per cwt. extra. Cut to sizes, 4/- per cwt. extra.

Old lead, ex London area, at Mills ..... per ton £18 0 0.

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NEW BUILDINGS

BELLSHILL. — BUILDINGS.—Plans prepared by George Porter, 422, Main-st., Bellshill, for new buildings.

GLASGOW. — ALTERATIONS, ETC.—Plans prepared for alterations and additions, the architects being Millar & Black, 132, West Regent-st., Glasgow.—Plans prepared for new messroom and other buildings, for which the architects are James Taylor, Thomson and Partner, 212, Bath-st., Glasgow.

GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.

ORDINARY GLAZING QUALITY (O.Q.) AND SELECTED GLAZING QUALITY (S.Q.).

PER FOOT SUPER.

In sizes not exceeding 80 in. long or 48 in. wide or 110 united inches.

	O.Q.	S.Q.
18 oz. in 300 ft. cases	2½d.	2¾d.
24 oz. ,, 200 ft. ,,	3½d.	4¼d.
26 oz. ,, 200 ft. ,,	4d.	4¾d.
32 oz. ,, 200 ft. ,,	5½d.	6¼d.
24 oz. in 300 ft. cases	3½d.	4¼d.
26 oz. ,, 300 ft. ,,	3¾d.	4¾d.
32 oz. ,, 300 ft. ,,	5¼d.	6¼d.
Fluted, 21 oz.	9½d.	

Extra price according to size and substance for squares cut from stock.

ENGLISH ROLLED PLATE AND FIGURED CATHEDRAL, ETC., IN CUT SIZES.

Over 500 ft. super of all kinds.	Per ft.
Rolled plate, ¼ in.	5½d.
Rough cast double rolled, ⅛ in.	6½d.
Rough cast double rolled, ¼ in.	6½d.
Figured rolled, and Cathedral, white	6½d.
Figured rolled and Cathedral, tinted	9½d.
Rolled Sheet	6d.
Reeded, Broad Reeded, Cross Reeded and Chevron Reeded, ¼ in. thick	0 10½

Rolled plate is the same price as rough cast double rolled.

	Per ft. s. d.
Wire Rolled, ¼ in. thick	0 9½
Wired Cast, ¼ in. thick	0 9½
Georgian Wired Cast	0 10
"Calorex" Sheet, 21 oz.	2 6
,, ,, 32 oz.	4 0
,, Cast, ¼ in. thick	0 10
,, ,, ⅜ in. thick	1 0
,, ,, ½ in. thick	1 2
Non Actinic Glass, ¼ in. thick	0 9½
,, ,, ,, ⅜ in. thick	1 0
,, ,, ,, ½ in. thick	1 2

"VITA" GLASS.

	Per ft. s. d.
"Vita" Plate Glass, about ⅛ in. thick	
To 7 ft. super	5 0
Over 7 ft. super	7 6
"Vita" Sheet Glass, about 18/20 oz.	2 0
Cathedral "Vita" Glass :	
¼ in. thickness	2 0
⅜ in. ,,	3 0
½ in. Georgian Wired "Vita" Glass	3 6

GLASS BRICKS.

	r. d.
P.B. 1—8 in. × 4¼ in. × 3⅛ in.	2 9 each nett
P.B. 2—5¼ in. × 5¼ in. × 3⅛ in.	2 6 ,,
P.B. 3—7¼ in. × 7¼ in. × 3⅛ in.	3 6 ,,
P.B.32—7¼ in. × 7¼ in. × 3⅛ in.	3 6 ,,
Radiused Corner Bricks to match up with—	
P.B. 2	4 6 each nett
P.B. 3	6 0 ,,
P.B.32	6 0 ,,

CURRENT AND PROPOSED NEW BUILDINGS

Altrincham.—T.C. propose adaptation of premises for second war-time nursery.

Bebington.—T.C. propose war-time nursery at Bradnor.—T.C. approved: Extensions to Animal Nutrition Laboratories, for Committee.

Chesterfield.—T.C. propose day nursery at Brampton.

Coventry. — E.C. received approval of B.E. to erection of two "Maycrete" prefabricated buildings for temporary school, at £3,080, at Whitley Abbey.

Dewsbury. — E.C. propose building at Boothroyd-la. school for nursery classes.

Dudley.—Board of Management of Guest Hospital propose convalescent home.

Hebburn-on-Tyne. — Extensions proposed. Plans by Cackett, Burns Dick & McKellar, Ellison-pl., Newcastle-on-Tyne.

Kidsgrove. — Staffs C.C. propose war-time day nursery.

Leigh.—T.C. propose omnibus garage and new omnibus centre.

Limehurst.—R.D.C. propose war-time day nurseries.

Market Drayton.—U.D.C. propose public conveniences at Cross-st.

Newport, Salop. — U.D.C. propose improvements to isolation hospital.

Oakengates.—Shropshire C.C. propose prefabricated building for day nursery.

St. Helens.—T.C. approved: Bank premises for Wigan Trustee Savings Bank, Ltd., 701, Ormskirk-rd., Pemberton, Wigan.

Salford.—Youth Council propose adaptation of Hope Congregational school for youth centre.

Stafford.—T.C. propose building at South Wales site for second day nursery.

Stockton-on-Tees. — A. Harrison, 69, High-st., prepared plans for converting premises at Imperial-ave. into two flats.

Urmston.—U.D.C. propose additional war time nurseries.

Whitehaven.—T.C. received approval from M.H. for day nursery at Castle Park.

Workington.—T.C. propose war-time day nursery.

BRITISH RESTAURANTS AND CANTEENS

Atherton.—U.D.C. propose verandah and extensions to B.R. at Bag-la., at £380. Plans by F. L. Boydell, S.

Buckingham.—T.C. approved structural alterations to existing buildings for conversion into B.R., at £600. Plans by B. G. Chilvers, B.S.

Chadderton.—U.D.C. approved canteen for Lancashire Cotton Corporation, Ltd., Blackfriars House, Manchester 3.—U.D.C. propose alterations to Busk Methodist Sunday-school for adaptation as B.R. Plans by F. W. Pexton, S.

Chesterfield.—R.D.C. propose building at Holmewood for B.R. Plans by J. B. Wikeley, S.

Crofton.—West Riding E.C. propose prefabricated building for school canteen.

Durham.—Canteen to be built at Byermoor. Plans by L. J. Couves & Partners, Westfield-ter., Gosforth, Newcastle-on-Tyne.

Hetton-le-Hole.—U.D.C. to set up B.R. at Easington-la. Plans by J. Butterworth, S.

Hoole.—U.D.C. propose conversion of All Saints' Parish Hall, Westminster-rd., for B.R. Plans by R. D. Jones, S.

Kirkburton.—U.D.C. propose B.R. at Lepton. Plans by J. A. Haigh, S.

Macclesfield.—T.C. propose conversion of existing premises at Hurdsfield into B.R. Plans by M. Tetlow (A.), Borough Architect, Pear Tree House, Jordangate.

Manchester. — Co-operative Wholesale Society, Ltd., 1, Balloon-st., propose works canteen.—British Oil and Cake Mills, Ltd., propose works canteen.

Middleton.—T.C. approved: Canteen for combined Egyptian Mills, Ltd., 26, Cross-st., Manchester 2.

Oldham. — T.C. approved canteen for Iris Mill, Ltd. Plans by Cruickshank & Seward (F.), architects, 16, Princess-st., Manchester 1.

Sheffield.—Public Health Committee propose central cooking depot at Nether Green.

Swadlincote.—U.D.C. propose B.R. at Church Gresley, nr. Burton-on-Trent. Plans by G. S. Baker, S.

Tamworth.—R.D.C. approved canteen at Dexter colliery for Kingsbury Collieries, Ltd., Colliery Offices, Tamworth.

Urmston.—U.D.C. propose decorations and renovations at Gateway B.R., Flixton-rd. Plans by E. L. Leeming, E. & S.

Worcestershire.—E.C. propose additional canteens at eight schools. Plans by H. Rowe & Son, County Architects, 38, Foregate-st., Worcester.

TENDERS

The Editor welcomes authentic information for this feature from architects, surveyors or contractors. Items should reach 4, Catherine-street, Aldwych, W.C.2, not later than Tuesday morning.

Tenders for A.R.P. work will be found under "A.R.P. Schemes."

* Denotes *accepted*.
† Denotes *provisionally accepted*.
‡ Denotes *recommended for acceptance*.
§ Denotes *accepted subject to modification*.
¶ Denotes *accepted by H.M. Government departments*.

Ancoats.—Offices and boiler-house for heating to buildings. Harry S. Fairhurst & Son (FF.), 55, Brown-st., Manchester 1, architects: *J. Bailey, 72, Market-st., Droylsden, nr. Manchester.

Antrim.—New nurses' room at hospital. F. D. Brown & Sons, Consulting E. & Architects, Bank of Ireland-chbrs., Queen's Bridge, Belfast: *Samuel Baal, "Hillcrest," Antrim, Co. Antrim, N. Ireland.

Ashton-under-Lyne.—Repair, extension and adaptation of St. John's, Lower schools, Hurst, for war-time nursery, for T.C. A. T. Kemp, B.S.: *Edwin Marshall & Sons, Ltd., Samford Saw Mills, Cockbrook, Ashton-under-Lyne.

Billingham-on-Tees.—Erection of building for U.D.C.: Stephen Coates, Ltd., Middlesbrough.

Brentford and Chiswick. — Erection of B.R. at Cambridge-rd., for T.C.: *T. B. Williams, Ltd., 82, Victoria-st., S.W.1, £4,972.

Darlington.—Alterations to premises, for Prudential Insurance Co., Ltd.: *G. Dougill & Sons, Chestnut-st., Darlington.

Darlington.—Erection of ambulance room and canteen: *W. S. Hutton, Ltd., Post House Wynd, Darlington.

Darlington.—Erection of compressor house: *Bussey & Armstrong, Brinkburn-rd., Darlington.

Darlington.—Alterations to laundry: *G. Dougill & Sons, Chestnut-st., Darlington

Denby Dale. — Exterior painting of 44 houses and buildings, for U.D.C. E. E. B. Harrison, S.: *Haigh & Layton, Wesley-view, Emley, nr. Wakefield.

Droylsden. — Additional temporary school accommodation, for Lancashire E.C. L. Evans, County Architect, County Offices, Preston: *Wellerman Bros., Ltd., Edward-st., Hyde, Ches., £1,899.

Gateshead.—Alterations at "Briarmede," for T.C. F. H. Patterson, B.E.: *William Hall (Contractors), Ltd., Derwentwater-rd., Gateshead, £530.

Hereford.—Erection of a war-time day nursery at Whitecross, for E.C. W. M. Shimmin, City S.: *Bayley Bros. (Hereford), Ltd., Cotterell-st., Hereford.

Huddersfield.—Assembly and erection of prefabricated concrete huts on three sites, for T.C. B.E. & S.: *Geo. Graham's, Sons & Co., Crosland Moor, Huddersfield.

Hulme.—Workshop, etc. Harry S. Fairhurst & Son (FF.), 55, Brown-st., Manchester 1, architects: *W. Thorpe & Son, Ltd., Chester-rd., Cornbrook, Manchester 15.

Hyde.—Erection of prefabricated building. T. H. Higson, B.S.: *A. E. Prescott, Ltd., Holden-rd., Leigh, Lancs.

Lancaster. — War-time day nursery at Willow-la., for T.C. F. Hill, City S.: *Robert Thompson & Morris, Queen-st., Lancaster, £2,529.

¶London (Air Ministry). — Contracts placed to the value of £500 or over for period ended August 15:—

Civil engineering work: Anglo-Scottish Construction Co., Ltd., Horsham, Sussex; G. P. Trentham, Ltd., Hillingdon, Middx.; Richard Costain, Ltd., London, S.W.1.

Building work: A. E. Symes, Ltd., Brentwood, Essex.

General maintenance work: M. & F. O. Foster & Co., Ltd., Hitchin, Herts; John Williams (Liverpool), Ltd., Liverpool; G. & J. P. Gregory, Caernarvon.

¶London (Ministry of Works).—Works contracts placed during the week ending August 20:—

Bucks: Building work, A. Roberts & Co., Ltd., 74, Earls Court-rd., Kensington.

Bucks: Heating and hot-water service, Fred G. Alden, Ltd., 6-7, New-rd., Oxford.

Cardiganshire: Heating and hot-water service, Bennett Bros. (Contractors), Ltd., Heathfield Works, Carlton-ter., Swansea.

Ches: Heating and hot-water service, John T. Cresty & Sons, Ltd., Willaston, Nr. Nantwich, Ches.; Lloyd & Cross, Ltd., 68, Argyle-st., Birkenhead.

Glam: Electrical work, Edmundsons Electricity Corporation, Ltd., 24-30, Gillingham-st., S.W.1.

Herts: Building work, J. Hammond & Son, Ltd., 97, St. Peter's-st., St. Albans; C. Miskin & Sons, Ltd., Romeland, St. Albans; John Ray, Ltd., Norton Way, Letchworth.

Huntingdon: Electrical work, The Berkeley Electrical Eng. Co., Ltd., Vincent House, Vincent-sq., S.W.1.

Merionethshire: Building work, William Cowlin & Son, Ltd., Stratton-st., Bristol 2.

Middx: Building work, Ernest Knifton, Ltd., Langledge-la., Edmonton, N.18.

Northumberland: Building work, R. Carse & Son, Ltd., Amble, Northumberland.

Shropshire: Building work, Wm. Sharratt, Ltd., Church-la., Wolverhampton; Arthur M. Griffiths & Son, Ltd., Thomas-st., Wolverhampton.

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Worcs: Building work, Espley & Co., Ltd., 77, High-st., Evesham; William Weaver, Ltd., Strand, Bromsgrove; William Sapcote & Sons, 87, Camden-st., Birmingham.

¶**London (War Dept.).** — Works contracts placed by War Dept. for week ended August 15:—
Midlothian: Miscellaneous work, Wm. Dickson & Co., Ltd., Musselburgh.
Midlothian: Hutting (erection), W. & J. R. Watson, Edinburgh; Hepburn Bros., Ltd., Edinburgh.
Lancs: Miscellaneous work, Smith & Briggs, Ltd., Old Trafford, Manchester; L. Marr & Sons, Liverpool.
Ches: Road work, L. Brown & Sons, Ltd., Wilmslow, Ches.
Norfolk: Miscellaneous work, R. Hogg & Sons, Coney-Weston, Suffolk.
Northamptonshire: Miscellaneous work, Brightside Foundry & Engineering Co., Birmingham.
Suffolk: Miscellaneous work, C. Deaves, Burgs, Colchester.
Suffolk: Miscellaneous work and hutting (erection), Wm. C. Reade, Ltd., Aldeburgh.
Glam: Miscellaneous work, Copp Bros., Ltd., Barry.
Oxon and Berks: Miscellaneous work, The Harcombe Bldg. Co., Ltd., Henley-on-Thames.
Bristol: Roadwork, Stone & Co. (Bristol), Ltd., Bristol.
Glos: Roadwork, W. G. Northcott & Co., Ltd., Exeter.
Middx.: Work, Haines & Warwick, Ltd., Seven Kings, Essex.
Sussex: Miscellaneous work, Z. Peskett & Sons, Ltd., Littlehampton.
Co. Derry: Roadwork, R. Colhoun, Ltd., Londonderry.
Co. Antrim: Miscellaneous, Wm. Logan & Sons, Belfast.
Co. Down: Hutting (erection), J. & R. W. Taggart, Belfast.

Manchester.—Extensions. Drury & Gomersall, architects, 11, Imperial-bldgs., Oxford-rd., Chorlton-on-Medlock: *P. Hamer, Ltd., 15, Park-st., Swinton, nr. Manchester.

Manchester.—Reconstruction of workshop. E. A. Newton (L.), architect, Rutherford-chbrs., Bow-la., Princess-st.: *T. W. Evans, 3, Spring-gdns., Barlow Moor-rd., Didsbury, Manchester.

Rochdale. — Alterations at two fire stations, for C.B. B.S.: *The Moston Brick & Building Co., Ltd., Kenyon-la., Moston, Manchester 10; *Lear & Heywood, Ltd., Law-st., Sudden, Rochdale.

Sowerby Bridge.—Resetting two beds of horizontal retorts, for U.D.C.: *Robert Dempster & Sons, Ltd., Rosemount Ironworks, Elland, Yorks, £1,465.

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Woking. — Construction of sewer overflow, Byfleet, for U.D.C. E. & S.:—

Patterson & Dickenson, Ltd., London, N.W.9	
D. G. Somerville & Co., Ltd., London, S.W.1...	£808
H. W. Bailey & Co., Stoke Poges...	774
F. W. Chandler & Co., Victoria-st., S.W.1	720
F. Troy & Co., Ltd., Slough ...	609
John Gordon, Surbiton	595
Sadler & Co., Winchester	563
A. Hardy & Co., Woking	482
*Day & Son, 132, Terrace-rd., Walton-on-Thames	472

Workington.—Structural alterations to premises at Washington-st. for conversion into cooking centre: *R. Stephenson, 4, Ritson-st., Workington, £180.

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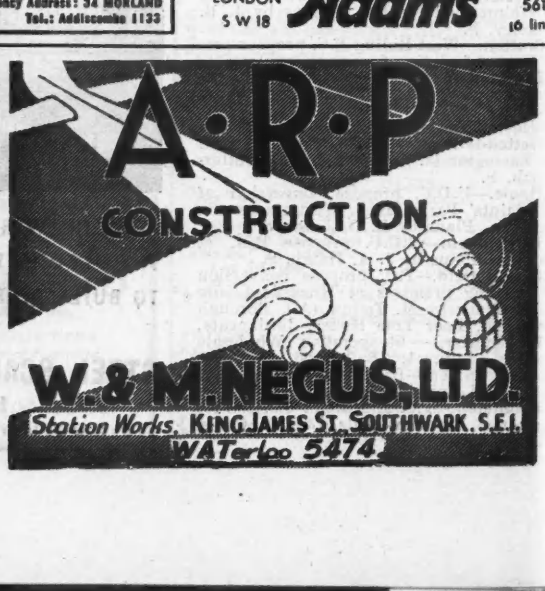
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